



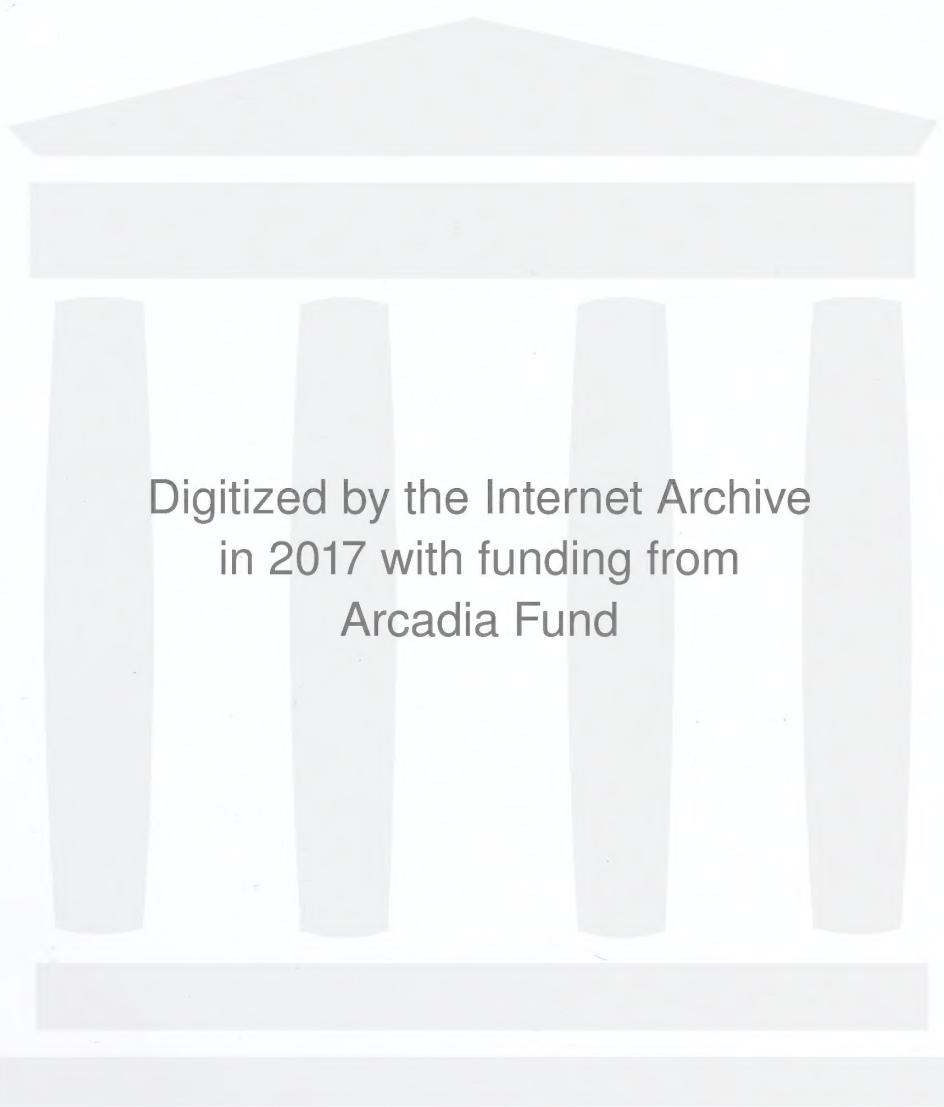
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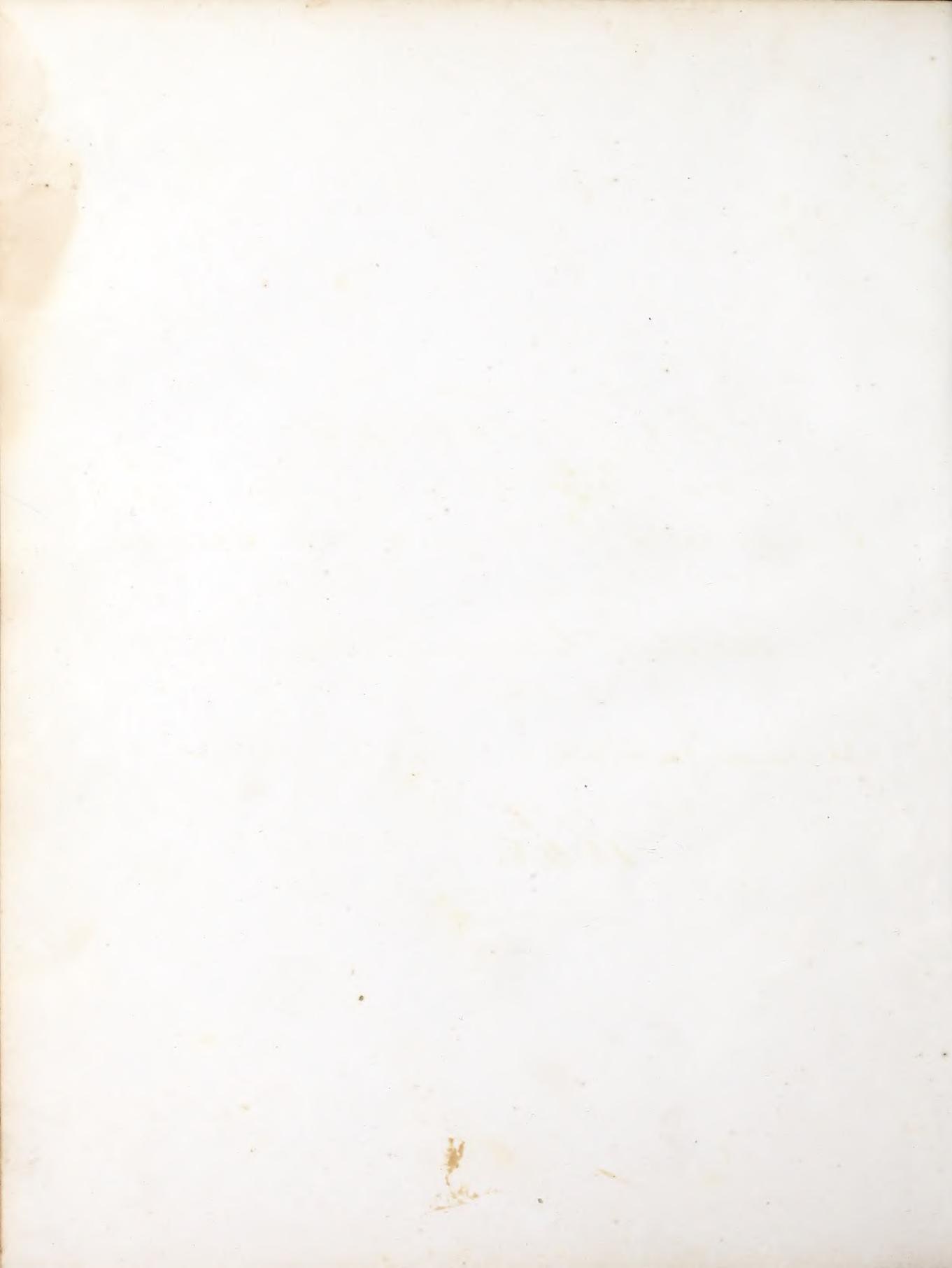


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Dissertations
read by the
Candidates for Degrees and Licenses,
at the
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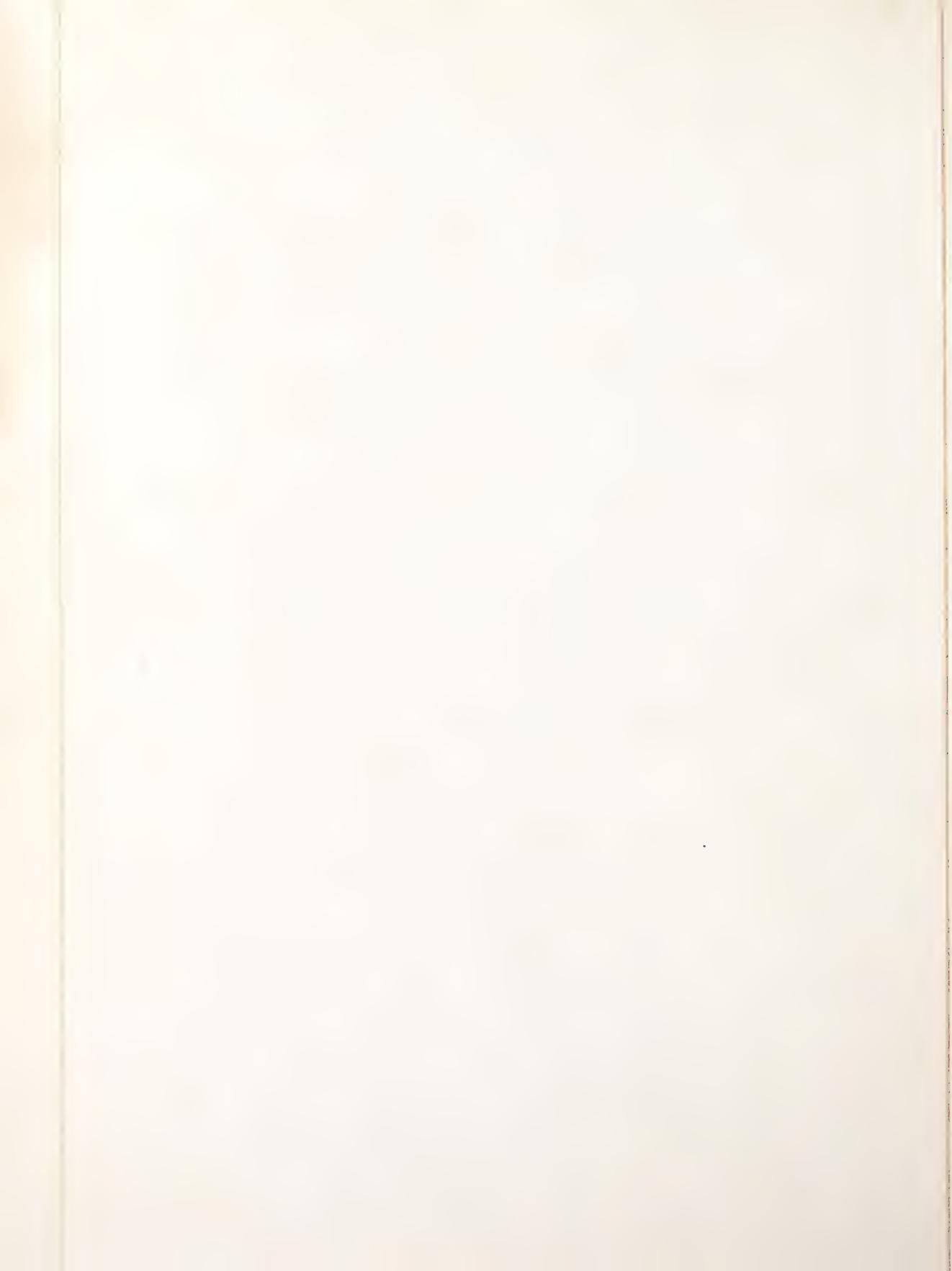
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I.

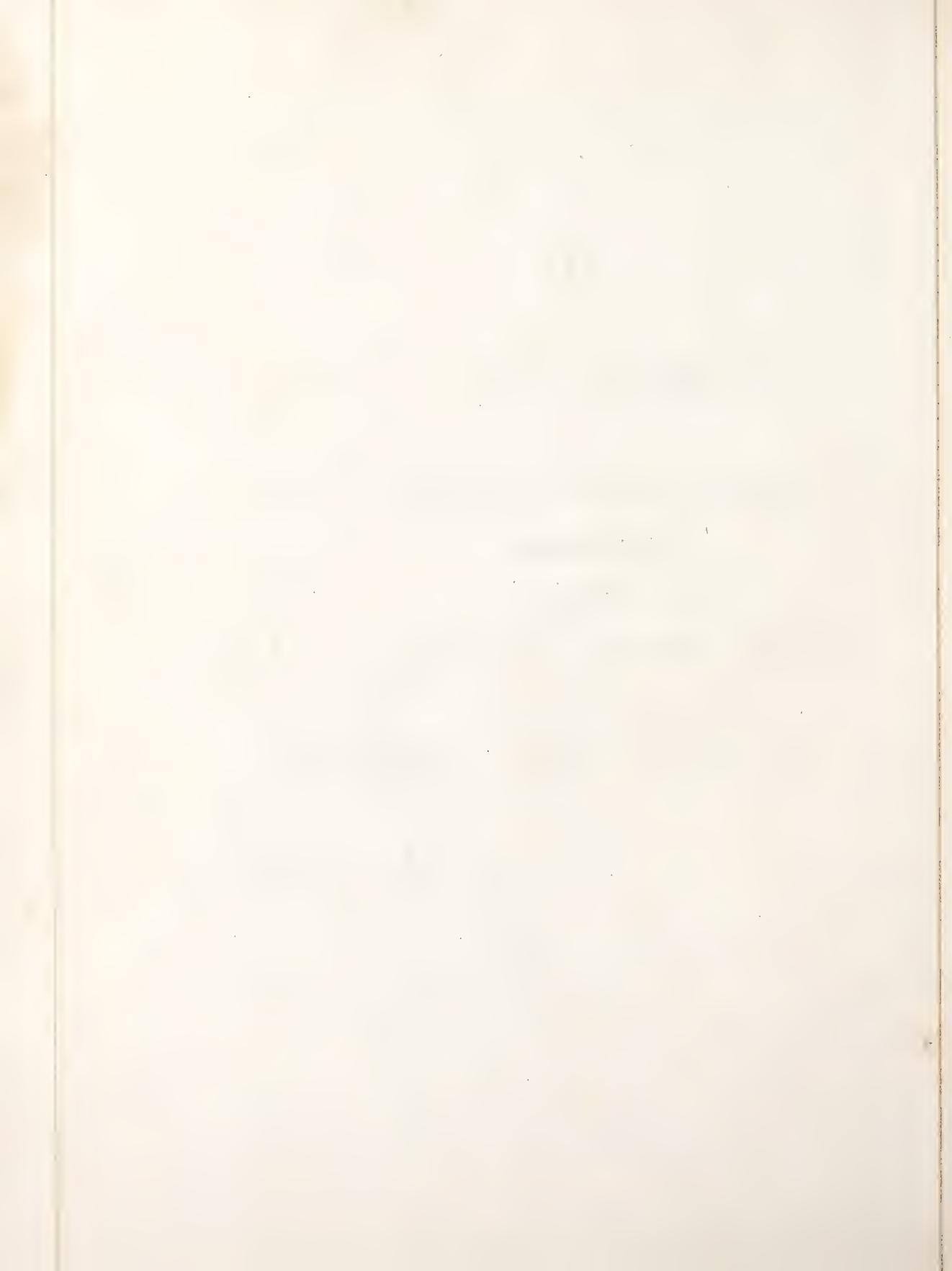
Dissertation

on

The Specific nature of Inflammation.

By

George Washington Benedict,
of Salisbury,
Candidate for a Licence.



The Specific nature of Inflammation

From the time of Hippocrates until the present moment, the theoretical views ^{regard} to the nature of inflammation, have been as numerous and as varied as the authors who have written upon the subject, and perhaps there is no subject which has enlisted a greater number into the field of speculation than this. — It is true that previous to the period of the discovery of the circulation of the blood by Harvey, the opinions which were held on this subject underwent no material change, nor is this fact astonishing, when we recollect how limited were the opportunities which the ancients, so famed for anatomical investigation, which especially, is the true basis upon which an accurate medical knowledge is founded. — After this period however,

which may be considered as forming an era in the medical science, the ancient doctrine of phrenion became gradually discredited, and a wider scope was given to the imagination, from which resulted theories far more numerous and plausible in their character.

It would be foreign to my purpose to enter into discussions relative to the merits or demerits of the various hypotheses formed on the subject of inflammatory action, suffice it to say they have all been refuted, and superseded by more modern writers, and are now looked upon as exhibitions of the ingenuity of their authors, rather than as conferring any real benefit upon mankind.

Before offering any remarks in regard to the nature of inflammation, let us observe its phenomena as laid down by writers. — Inflammation is



the application of a stimulus, which is capable of exciting inflammation, the globules of blood are seen to move more rapidly than usual, the currents are smaller in consequence of a constricted state of the small vessels, and there is an accelerated flow of blood through them; but this is soon succeeded by the opposite effects of dilatation. — The motion in the vessels most affected, is now slower than natural, there is a general afflux of blood from the surrounding parts to the point of irritation, and a retrograde motion is frequently observed. — At this time stagnation and coagulation often supervene and the globules are found to coalesce into irregular and confused masses.

Such are the phenomena of incipient inflammation, and from these we may infer that its physical character depends upon an undue accumulation of blood in the capillary extremities of



the arteries, and that this unnatural determination is the result of a peculiar principle excited into action by some particular agent or exciting cause. The cases of rot as are termed "spontaneous inflammations" for which no physical cause can be ascribed cannot be considered as exceptions to this, for it is not reasonable to deny the existence of an exciting principle, any more than deny the existence of the disease, for it is incompatible with the known laws of nature, that the harmony of action within the animal economy, should become deranged without the existence of some morbid principle, adequate to the effect.

The essential nature or proximate cause of inflammation is always the same, consisting in a peculiar form of morbid action of the capillary blood vessels of the part; but not necessarily (as has been asserted by writers) either in diminished or increased action, for both these states may exist



not only in the different forms of inflammation, but in the different stages, either in the commencement or termination.

The varieties of inflammation, and the various phenomena which it exhibits are all to be ascribed to difference in the exciting cause, in the character of the tissue affected and in the predisposition of the system.

This proposition will be considered more at large,

First. — The local determination of inflammation is influenced by the exciting cause, — for all specific diseases arising from visible causes there are certain phenomena presents which indicate a tendency to local determination in all constitutions.

No better illustration can be given of this principle than the specific action of various poisonous and medicinal substances; many of these in whatever manner they may have been introduced into the system whether by cutaneous absorption



by injection into the veins, or simply taken into the stomach, exert a special influence upon some particular organ, or set of organs.

Thus, Croton oil acts especially upon the alimentary ^{canal} Mercury upon the salivary glands and skin — Tartar Emetic upon the stomach — Amyl Nitrite upon the spinal marrow &c. In fact, there are comparatively few remedial agents which do not either directly or indirectly, exert some influence upon some particular organ of the ^{body}. Indeed, says a late writer, "this knowledge forms the very foundation of our practice."

The influence of cause, in determining the locality of disease may, be further evinced by the regularity and similarity of the phenomena, manifested in every variety of inflammatory disease.— The various poisons, ^{producing} contagious diseases, excite specific inflammation of the skin and mucous membranes as is known to be the fact in regard to, Variola—Scarlatina—Measles &c.—The inflammation



exerted in the system by the absorption of
virus, from denuded surfaces, derived from
dead bodies, in all cases manifestly a tendency
to the erythematous type, and exerts its special
action upon the cellular membranes.

Syphilis, throughout all its stages, exhibits
in its more prominent characters, a certain degree of
uniformity in all individuals labouring
under it. - In the first stage there is almost
universally an inflammatory affection of the
mucous membranes of the throat and
fauces, - In the second a peculiar tendency
to the skin constituting the various syphilitic
eruptions, and lastly the different bones
and their periostiums become affected, causing
nodes &c,

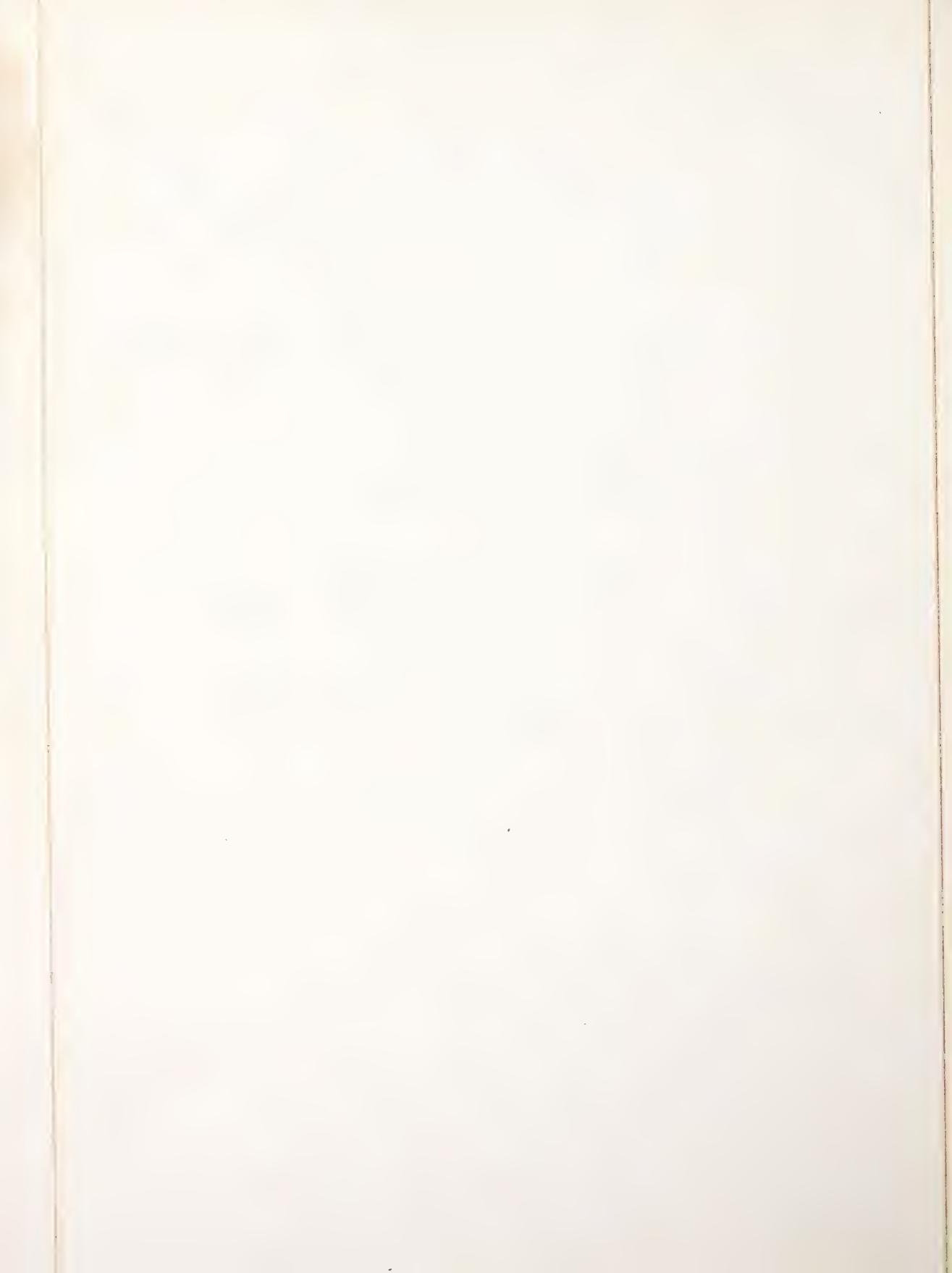
The various inflammatory affections having
a rheumatic origin are especially directed to
the serous and fibro-serous membranes, as
the synovial membranes of the different joints,
the external and internal lining membra-
nes of the heart, - The morbid infection



derived from the glanders in horses, received into the system either by inhalation, or by absorption from an abraded ^{surface} part, tends easily to produce an inflammatory state of the nasal organs -

Thus we find in the above enumerated diseases a certain uniformity of character presented by each in all constitutions which cannot be considered as accidental -

Whatever may have been the manner of introduction into the system of the morbid exciting principle upon which the disease depends, or to whatever source it may owe locality of effect, whether by transmission through the vascular, nervous, or absorbent systems, there is consequent to this principle a peculiarity of effect exhibited in one or more particular portions of the body, and a certain uniformity of action presented in all varieties of the disease depending upon this principle though necessarily modified by various circumstances -



Secondly.—The nature of inflammation is influenced by the character of the tissue affected.—As each individual organ or tissue of the animal economy exercises certain powers, and performs certain functions peculiar to itself, in its healthy state, and as it maintains its own identity of character, notwithstanding the constant removal, and renewal of its constituent particles by the process of absorption and reproduction, we may reasonably conclude that in a diseased condition each of the tissues would present characters different from the others, and those bearing an inflammatory type of disease symptoms peculiar to themselves,—or reality upon the phenomena presented by the individual tissue or organ when diseased depends our system of diagnosis.

Besides the more prominent characters of inflammation, heat, pain, redness and swelling, which are present in some proportion in most varieties of the disease, there are

other characters peculiar to each disease, which like the more prominent systems, are modified by the cause, intensity of the disease &c.

For instance, inflammation of the serous and synovial membranes, is usually attended with more fever and pain in proportion to its extent than that of the mucous membranes or parenchymatous tissues, and as a general rule shows a tendency to spread itself over a more extensive surface - The effusion resulting from inflammation of these membranes is of a peculiar kind, and undergoes important changes peculiar to itself - It is a sero-fibrous fluid, which by the absorption of its more limpid parts, becomes a concrete substance and by the extension of blood vessels into it of the adjoining membranes (causing occasionally adhesion of the opposing surfaces), it becomes a living organized tissue possessed of the same vital properties as the membrane from which it derives its nutriment -

Inflammation of the mucous membranes

like the serous has a tendency to diffuse itself over a considerable surface, but differs materially in the nature of its secretions. — Although these membranes in certain cases secrete a fluid capable of forming a false membrane, as in the larynx and trachea in croup, and in the intestines in dysentery, yet in no cases do these false membranes become living tissues, or produce thickening or hardening of the membranes by which they are secreted — Also there is more variety in the effects of inflammation of the mucous, than of the serous membranes. — Thus, the mucous membranes of the bronchial and lungs when inflamed, are usually affected over a more extensive surface and are more subject to edematous effusions in the submucous tissues, than of the lining membrane of the alimentary canal, which is more liable to become affected with numerous circumscribed ulcers as in the various inflammatory fevers. — The mucous membranes of the urinary organs when



inflamed, manifest a peculiar tendency to profuse secretion, and like that of the air passages to degenerate from the acute, into the chronic form.

An inflammation of the cellular membranes and parenchymatous tissues when not terminating in what is commonly called "resolution," there is a tendency to the deposition of lymph, and subsequently to the formation of circumscribed abscesses. - This is the course of what is termed healthy inflammation in which there is presented a similarity of phenomena, in these various substances. But there are other characters exhibited by the parenchymatous substances of different organs, when inflamed depending wholly upon the variety of tissue. Thus, the lungs are more particularly subject to tuberculous depositions. - The kidneys to a peculiar granular affection; melanosis more frequently attacks the liver than other organs; the glands of the mammae, are usually the seat of peculiar carcinomatous diseases &c

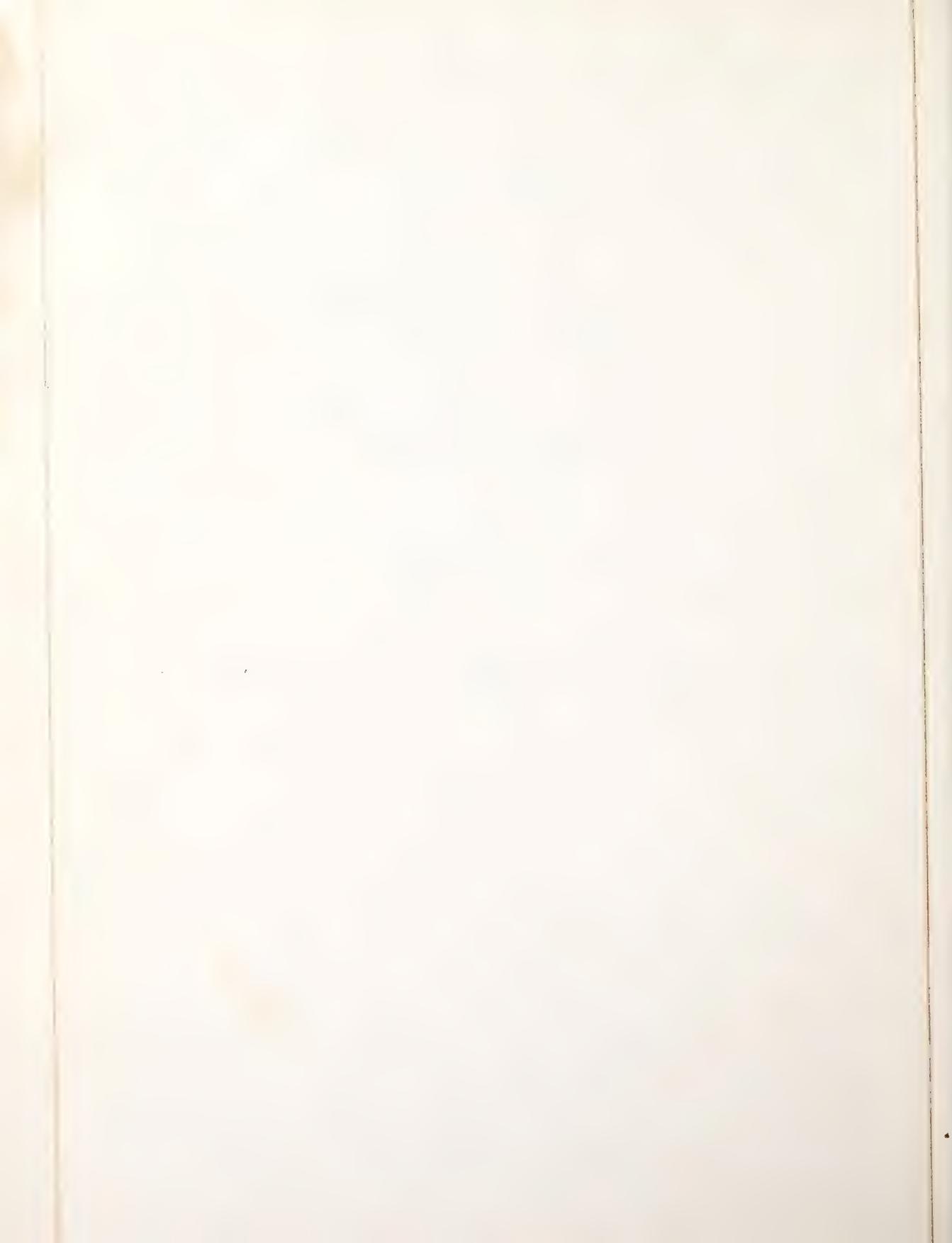


The skin likewise when affected by the different inflammatory diseases, or becomes inflamed from any other cause, presents certain characters peculiar to itself - There is usually more pain and a greater disturbance of the cerebral functions during inflammation of the skin than of any of the other tissues, probably depending upon its more immediate connection with the nerves of sensation - The secretions which are serous or lymphatic have a tendency to the formation of vesicular eruptions and ultimately to the destruction of the article.

As our principal means of diagnosis as before observed depends upon the phenomena presented by the particular tissues or organs when inflamed, it is often necessary to attend to certain symptoms, usually present termed "sympathetic", which have been divided into sensations and actions of sympathy - The first is referable generally to known nervous communication, as pain at the nervous extremities when inflamed at the trunk, or to continuity of tissue

as pain at the point of the urethra attending inflammation of the bladder. — The latter is supposed to depend upon a reflex action of the spinal marrow, and is illustrated by the convulsive action of the diaphragm and abdominal muscles, producing the vomiting which frequently attends inflammation of the brain, uterus, stomach &c and of the muscles of respiration, during inflammation of the mucous membranes of the air passages.

After the illustrations which have been given it needs no argument to prove that the specific nature of inflammation, is influenced by the tissue affected, or in other words that each individual tissue presents characters peculiar to itself. There are however certain modifications of these characters, which are probably dependent in all cases upon either the cause of the disease of which we have already spoken, or upon the predisposition of the system when under the influence of the disease which will form the subject of our last



remark in reference to the nature of induction — that there may and does exist in the constitutions of some individuals and in many cases for a considerable length of time, a predisposition to certain morbid actions, may be inferred from the fact, that the treatment of all diseases, has a particular reference to the condition of the constitution.

In all diseases hereditarily there must exist within the constitution of the offspring, the peculiar diathesis inherited from the parent until the period of its development, which may be protracted by its development being in many cases dependent upon some accidental exciting cause.

Inflammation when existing within a deranged system, whether having a constitutional origin, or arising from external noxious agents, exhibits phenomena peculiar to the constitutional affection.

The scrofulous inflammation, though produced by the same exciting ^{cause} as the healthy



is slower in its action, produces less febrile derangement, and is less influenced by antiphlogistic treatment. When external the skin over the tumor is soft and flabby. The suppuration is languid, consisting of a thin watery pus mixed with fragments of the consistency of soft cheese or lard; and gradually degenerates into foul introtable necrization. — When internal there is a tendency to the deposition of small granular bodies called tubercles, which ultimately follow the same general course as the external affections — Inflammation attending constitutional syphilis, carcinoma, and various other diseases likewise presents characters peculiar to each affection.

Thus we find that inflammation, throughout all its varieties and complications, to a certain extent preserves its identity of character —



II.

Dissertation

on

The character and duties of the physician.

By

John Adams Betts,

of Brooklyn, N. Y.

Candidate for the Degree of Doctor in Medicine.



The character, & duties of a Physician.

The duties and responsibility attached to the office of a medical practitioner, are in their nature peculiarly interesting & important.

A physician may be estimated as an invaluable blessing, or as a curse to the community, as he alleviates, by his judgment and skill, the calamities of mankind, or by his ignorance and rashness, inflicts incalculable misery and sorrow.

Having in his hands a weapon of immense power, it is incumbent on him to wield it with the utmost judgment and discretion; as a single erroneous application may terminate the awful fate of the patient consigned to his charge. The man, therefore, who maintains this important station in society, should possess the strictest integrity of character.

Disinterested benevolence and philanthropy, should be interwoven in the constitution of his nature. He should possess that modesty, and humanity, which melts at every distress, extending the hand

, relief and comfort to the afflicted, especially to
the widow, to the fatherless, and to him that hath
none to help him". He should devote no less attention
to the bed of helpless, pinching penury, than to the
sicker couch of wealth and luxury, and mingle
a sympathizing tear with those, whether rich or poor,
who are called to shed the tears of inconsolable sorrow.
He must manifesting an ardent zeal and solicitude
for the welfare of his patients, and devoting all
the energy of his soul to their service and comfort,
he is not to be actuated by the sordid motive of
acquiring fame or emolument; but by the irresistible
dictates of that tenderness and sympathy, which
have their origin in the best feelings of the heart.
To these qualities, should be added, an acute,
penetrating genius, a retentive memory, intuitive
discernment, and an intrepid and decided
disposition of mind.

Although the character here spoutrayed, is of no
ordinary cast, nor is it frequently exemplified;
but such was the great Hippocrates; such was
the pious and sagacious Sydenham; such the

illustrious and learned Boerhaave and Cullen; and no less deserving the applause of mankind, were those luminaries of American medicine, Rush, Miller, Warren, Barton, and many others the pride & ornaments of our own country.

They have left behind them memorials which can never be forgotten; and such models, as are worthy of imitation.

When we consider the great expense, and the time, requisite to acquire a complete medical education, and form the character of a physician worthy the great trust reposed in him by all ranks of society; when we reflect on his high responsibility, and the painful solicitude of mind for the fate of his patients; and the frequent exposure of his own health and life, while devoting himself to the services of others, it must be conceded, that no class of people can have a stronger claim to the respectful regards, and grateful remuneration of their employers.

Every practitioner, however, must calculate, in the line of his profession, to be subjected to the severest

trials, not only of his skill and abilities, but of his
patience and constancy, He will, on some occasions,
be called to encounter the whims & caprice of his
patients and friends.

Their mutual confidence will sometimes be withdrawn;
and his best services will be required with
tenderness and ingenuity.

The caprice of the sick may, to some extent, receive
indulgence, when no evil consequences can result
from it; but his address and forbearance should be
marked with that commendable independence and
firmness, which will neither sully his own charac-
ter, nor wound the dignity of his profession.

The condition of physicians in society is conspicuous,
honorable and dignified and their responsibility
consists, not only in the faithful discharge of
their immediate practical duties, but also in
viving with each other in the promotion of social
intercourse and professional urbanity; in directing
all their efforts to give respectability and order
to the practice of medicine, and to disconne-
ctance the vile practice of unprincipled pretenders;

in contributing all in their power, to perfect the
healing art, & disseminate its blessings to the community.

It should be the pride and ambition of every
medical man, to maintain the respectability of
their professional character.

They should reflect on their high responsibility,
and that they are answerable to a Supreme Power,
for every capital error, resulting from ignorance,
neglect, or inattention.

They should cultivate, with the greatest assiduity,
the talents with which they are endowed,
and a disposition to manifest their benevolence and
sympathy, by consulting the comfort, interest and
feelings of their afflicted patients, and admin-
istering with tender solicitude and a liberal
hand, the healing balm of hope and consolation.
Thus the miseries of man may often be lessened,
and the groans of suffering humanity happily
allayed.

The physician should direct his particular atten-
tion to every circumstance, which relates to the
cause, nature and cure of disease.

He should, especially, exert his endeavors to acquire an accurate knowledge of those, which are peculiar to the climate in which he resides, and of such as are usually prevalent at certain seasons, as every climate has a tendency to produce particular diseases, either from its excess of heat, or cold, or from other causes not perfectly comprehended.

Contagious and epidemic diseases should occupy a large share of the physician's attention, and, when these are prevalent, it will be incumbent on him to apprise the people of their danger, and to adopt, or recommend the most effectual method to prevent a more extensive communication of the disease.

Proper regulations respecting the articles of diet, air, cleanliness, and tranquillity of mind, should in all cases be enjoined; as of primary importance; without a due observance of which, the most judicious plans of medicine may be frustrated. These means of comfort and safety, are in the power of all, and physicians

should enforce, that prompt attention to them, which their well known usefulness and importance demands.

A physician, on the commencement of his functions, should not allow his mind to be enslaved by systems, nor to imbibe a bigoted attachment to great names, as there is no absolute perfection in systems, nor infallibility in the wisdom of man.

He is not to be implicitly guided by the doctrines, nor the practice of others, however eminent, but establish a course of practice, the result of actual facts, founded on knowledge, and repeated experience and observation.

In the exercise of practical duties, he will, or should, display a commendable candor and condescension, associating the moral virtues with professional duties.

He will avoid all appearance of vanity, and ostentation, manifesting, however, a modest confidence in his own merit, that he may command the confidence of others; for nothing

can be more unpleasant to a man of feeling than to discover a want of confidence in his judgment, and a ready acquiescence in his medical prescriptions, in this he will endeavor to combine simplicity with elegance, as far as may be consistent with the requirements of the particular case. He will confide in a few selected articles, judiciously adapted, that the indications may be answered by as few medicines as possible; avoiding that impudent parade, so peculiarly characteristic of the quack, and so disgusting to every intelligent observer.

It is requisite that a physician should have an absolute command over his patients; so far, at least, as to prevent any deviation from his rules and prescriptions, which ought, however, in no case to be unnecessarily rigid and minute.

It will often be justifiable, and even necessary, to conceal the name, and to reduce the medicine to a disguised form,

as invincible prejudices are frequently imbibed against certain remedies, which no reasoning can overcome, and a medicine covered with the veil of obscurity, is sometimes more valued than one openly and clearly explained.

The frequency of the physician's visits should, in every case, be regulated by his own sense of duty; his honor and delicacy being a sufficient pledge that they will not be unnecessarily multiplied and expensive.

In the chamber of the sick, no possible attention should be deemed superfluous; all the powers of his mind must be absorbed in the investigation of the case, nor should he permit the minutest circumstance to escape his observation.

A superficial, or cursory view of the patient, and a slight examination of the symptoms, will never satisfy the inquisitive and intelligent physician, nor inspire confidence in his skill and judgment.

He should be systematic in his examination and inquiries; recollecting that external

appearances, are often fallacious, and that many diseases exhibit symptoms similar and common to other diseases of a different nature.

The effervescent countenance, the pulse, the tongue, respiration, perspiration, and all the secretions and excretions, with numerous other particulars in connection, must come into a critical review, in order to ascertain the character of the disease, and the indications of cure.

It is of some consequence to recollect that the presence of the physician seldom fails to excite a temporary perturbation, and, until this subsides, and the mind recovers its calmness and tranquillity, no correct indication can be inferred from the state of the pulse; a careful, and repeated examination of which, will often be found of considerable importance in determining the nature and character of the disease.

Instances may occur in which a respectable and valuable member of society, perhaps

the head of a family, or the only child of child
of dying parents, affected with a fatal disease
may be confided to his care. While life and
death are hovering on a delicate and acute
point, all the energies of his mind will be
called into exercise, and the keenest anxiety
and solicitude will await him in the
discharge of his official duty.

Here is an opportunity to display that
sympathy, and anxious attention, which
engage the affections and confidence of
the patient, and, in many instances, are
of the utmost importance to his recovery.)

In all cases of a doubtful or dangerous
nature, when the physician cannot place
sufficient dependence upon his own judgment,
or when he finds that it would be a salutary
action to the patient or his friends, the counsel
of one or more skillful physician should be
requested.

By this he will relieve his own mind, and
increase the confidence and esteem of the

pulic and friends. Then a patient can enjoy the inexpressible comfort of recognizing in his physician, a kind and tender friend his visits will be anticipated and welcomed as those of a guardian angel ministering to his welfare; while he who is callous to the sentiments of humanity, and sympathetic, unfeeling, rough and blustering in his manners, will appear to the patient, like the messenger who comes to pronounce his awful doom.

The physician should not forsake the chamber of his patient, knowing that his presence is a constant source of consolation, and though he may be unable to cure, he may soothe, mitigate, and relieve.

He must not entrust the administration of medicine to unfaithful hands, but himself be the accurate observer of every effort of infallible nature, and the effect of every medicine prescribed. The balm of hope, which buoys the mind above despair,

must never be abandoned or withheld, and the prognostic, when required, should be peculiarly cautious and guarded.

The signs of approaching death are often extremely fallacious, and when it is absolutely impracticable to ascertain the precise moment of despair, the conscientious physician will not yield his hope, until life shall have spun out its last attenuated thread.

Instances have sometimes occurred of wonderful recoveries after the physician had discontinued his attendance, from the belief that the agonies of expiring nature had actually ceased.

It has been alledged by some, that, in all cases of doubtful or obviously hazardous event, the danger ought to be carefully concealed from the patient and friends, as the slightest mental exertion, during the state of disease and debility might precipitate the fatal termination. Such indeed, is the incomprehensible union, and secret influence

of the faculties of the soul, over those of the body, that a fatal prognostice might have a considerable share in its own fulfilment.

Occasions may however, occur, in which a cautious disclosure of the impending event, will, both in a moral and religious point of view, be deemed highly expedient & proper.

As the future peace and happiness of a family may depend on the arrangement of a patient's worldly affairs, it may be necessary to suggest, in the most prudent manner, the real danger, that this important duty may not be neglected.

As a man of sensibility, this is one of the most painful duties which he can be called to perform, but it is often indispensable, and requires great prudence, tenderness, and humanity.

It is undoubtedly necessary, in certain cases, to intimation the real danger to the relations of the patient, that opportunity may be afforded for calling in further medical assistance.

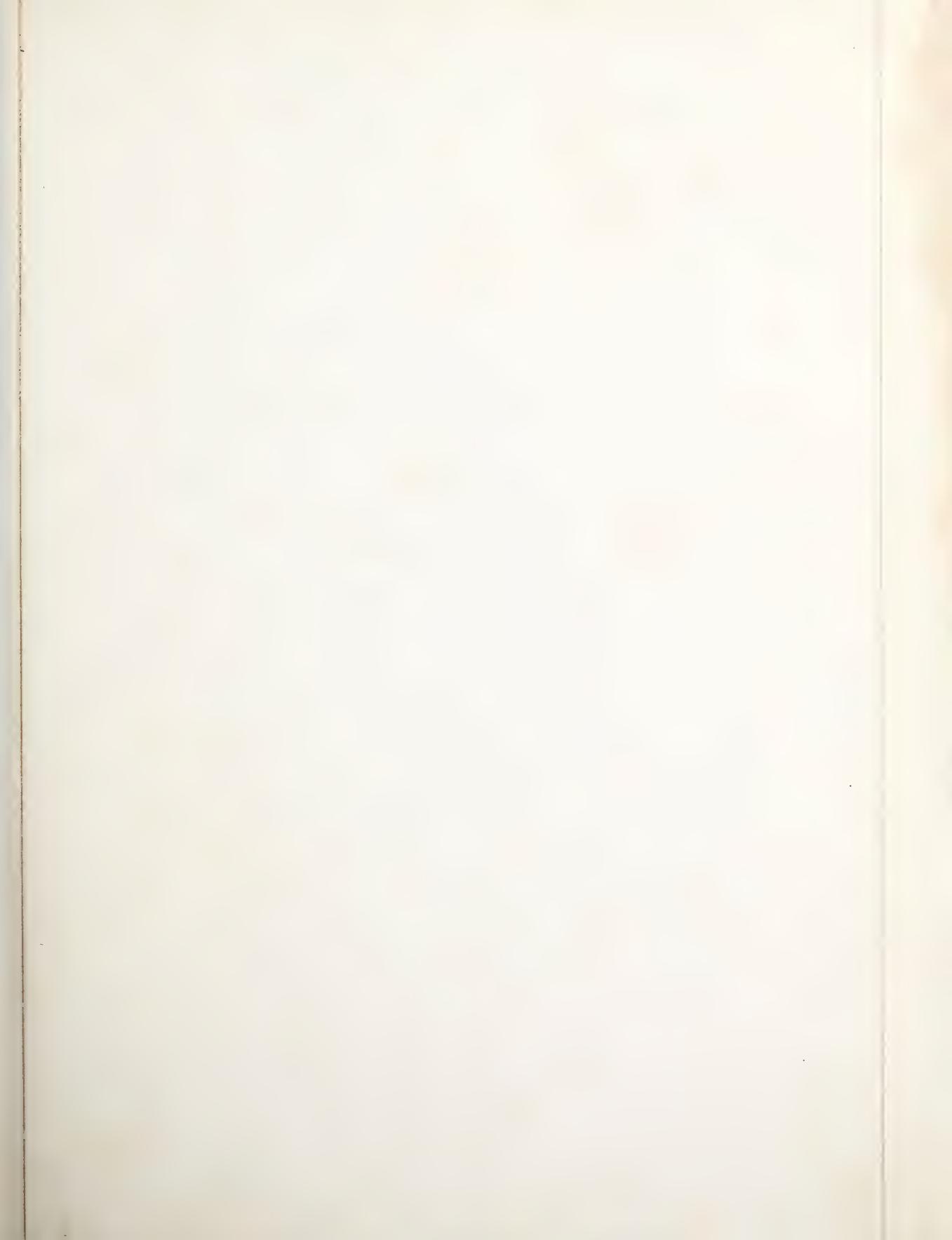
if they should deem it proper; nor is it to be considered foreign to the office of a physician to suggest to his patient the propriety of an interview with a pious clergyman, that he may administer the consolations of that religion so admirably calculated to compose the anguish of the mind, by encouraging a hope beyond the grave.

Among the virtues peculiarly required in the character of a physician, are those of temperance, sobriety and honesty. Temperance is the only panacea known in medicine; and the professors of health should enforce their instructions of temperance, by the influence of example. Of all the disgusting objects ever admitted into a sick chamber a drunken physician is incomparably the most odious, and he who sustains this character, ought never to receive the least countenance in the line of his profession, but be treated with the utmost neglect.

Peter Klein
January 1848

John Adams Betts







III.

Dissertation
on
The Respiratory Nerves.

By
William Lathrop Bliff, M.A. West. Univ.
of New Haven,
Candidate for the Degree of Doctor in Medicine



The Respiratory Nerves

The Anatomy and functions of the Nervous system, have been far in the back ground compared with other Physiological investigations; owing in part perhaps to the minuteness of their organization, and the complex character of their operations.

To Sir Charles Bell the world is indebted, for breaking the yolk and scattering the darkness so long surrounding this important part of the Physical Economy; though the labors of Marshall Hall in enriching this branch of Medical Science cannot be



forgotten. How much remains yet to be explored, but with this beacon light now forming up around us, so fully exhibiting the general principles, it is hoped the full development of this Department of American research will be accomplished.

The previous system appears to be unique in its operations. In the sanguiferous system we find many irregularities and anomalies.

Blood vessels will suffer various invasions and accommodate themselves to almost any exigency; for if the continuity is to be restored and veins be re-created and injured, by proper treatment they will soon repair the damage; and though the circulation be interrupted in some of the larger arteries even; the anastomosing branches will enlarge so that a requisite quantity of blood will be distributed to the parts; so also muscles may become atrophied and their functions be performed by others, partially or least. Not so with the eyes—if one lost



of nerves are paralyzed no other class of nerves can perform their functions. A nerve of common sensation cannot inform the functions of special sense, though it may be distributed to the same organ.

In this system we have the Magnicer Telegraph having mind of man. The brain or central spinal axis being the center of operations or general depot while the ganglia not unaptly referred to as the intermediate or sub stations; so that the commands from Head quarters are faithfully performed, though the lines may be extended to the most distant organs.

In the following remarks I shall confine myself chiefly to the respiratory nerves. There are two sets of nerves given off from the spinal cord, one from the anterior, the other from the posterior segment—the former are for motion, the latter for sensation. The third or respiratory system of nerves arises from the side of the spinal cord in the course of the respiratory tract as it is called.

now are the Par vagum or Pneumogastric,
the Pneumogastric, the spinal or respiratory
nerves of the pharynx, the superior respiratory in
the trunk, also called spinal aeration, the
great internal respiration of Phrenic, the ex-
ternal and glossopharyngeal nerves.

The Par vagum arises from the respiratory
tract by numerous filaments, making its
exit through the skull by the innominate
of the inferior foramen, passing down to the
lungs, lungs, heart, and stomach. The spinal
arises from the respiratory tract near to the
lower border of the nose, neck, and of the
many windings, again through the anterior
and posterior rami of the spine.

The spinal aeration takes off from the super-
ior part of the spinal marrow in a line
with the roots of the other respiratory nerves.
It does not pass out between the vertebral like
the other spinal nerves but passes up directly
into the skin & coming out with the Par-
vagum runs down upon the muscles of the neck

to those of the back. It begins at once by branching from the third, fourth, and fifth cervical, with the sixth branch of the second thoracic, and descends to the root of the neck resting on the scapular arteries, and then takes down through the middle mediastinum between the pleura and unites to the dia-phragm. The external respiration has a similar origin to the preceding running down the neck it passes through the axilla and spreads on the glabella of the back. The glabella originates by several filaments between the corpus cavernosum rectissimum, and issues from the skull through the regular foramen and is distributed to the mucous membrane of the tongue and pharynx. All these nerves are connected with muscles or parts concerned in respiration in its various forms.

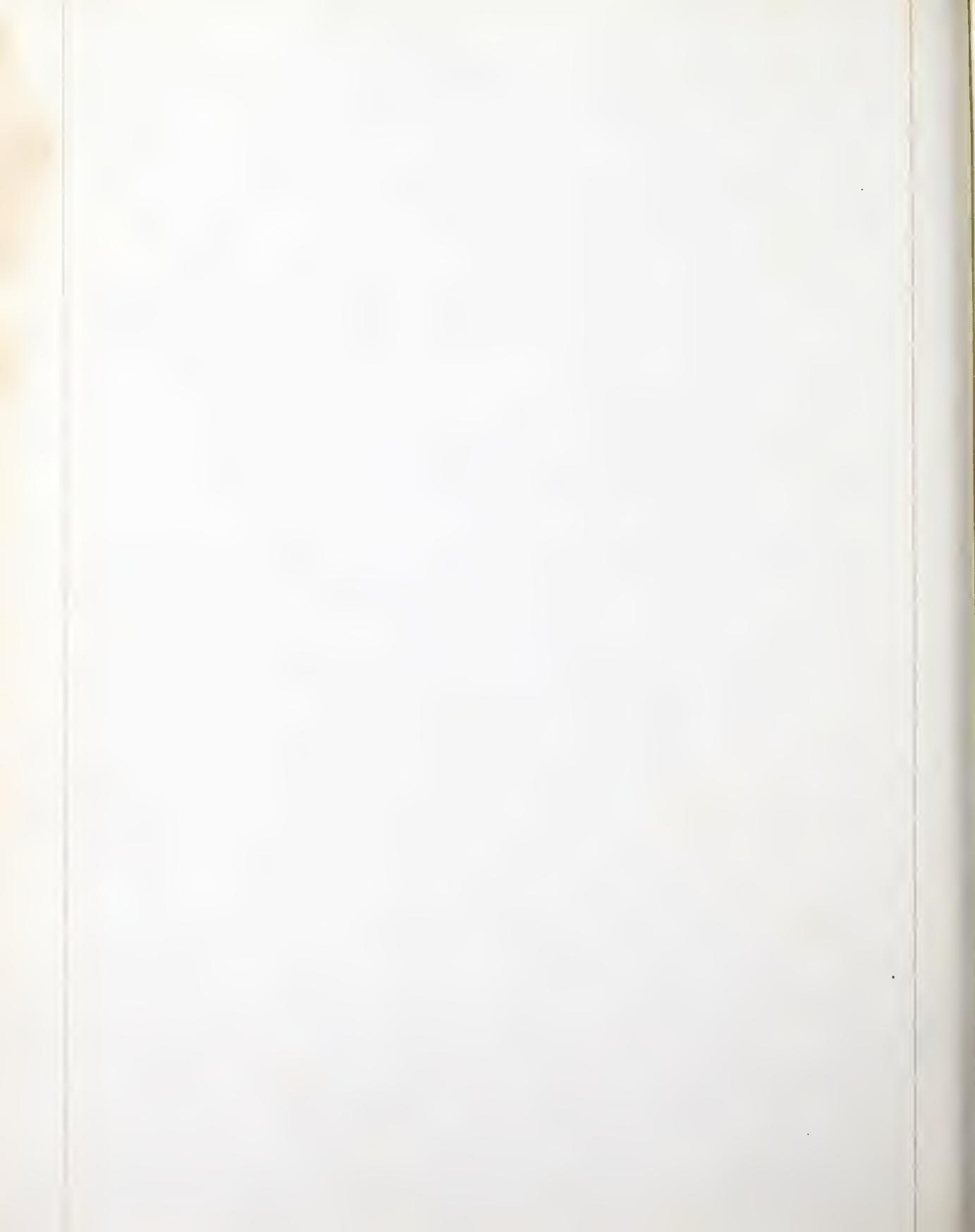
In gentle respiration there is but little motion perceptible except a slight movement of the varieties of the chest, but for respiration becomes hurried and laborious, and the shoulders

are raised the muscles of the Throat and
neck become tense, the nostrils are dilated,
the eyelids and brows are raised, the
lips being kept in motion. The texture of
the nerves of respiration though consisting
of fibrous or white nervous tissue ^{is} ~~is~~ ^{not} ~~not~~
are the nerves in general, is found to be of
a finer nature, and the filament most
minute than those of common sensation,
and while the latter are very sensitive, the
slightest touch causing pain, the former
are almost or quite insensible.

The functions of the face are many
and various. Here are assembled the organs
of vision, smell, taste, deglutition and res-
piration, with many of which the Facial
nerve is more or less connected. Laughing
and crying are dependant on this nerv-
ous fibre; for if it be paralysed on one side
of an individual, he laughs and cries only
on the opposite side. If also if the Portio dura
of a Dog be divided the nose of small will re-

nearly destroyed; and that this is the office
of a nerve, but an essential admixture
of moisture is not finally drawn in
the breath; but the ventilation of glands
indicates that the air containing the moisture
shall be directed to the bed of the
olfactory nerve.

Having noticed the nasal nerves
we refer to those of the skin which are
more directly connected with the act of respi-
ration. This is a broad question to animal
life. We know that sharks are oxygenated
the instant that they enter the water and
that a dog have each its appropriate organ of
respiration, as well as the higher orders of animals.
Respiration brings the air in contact with the
blood in such a manner that it becomes oxygenated,
removing the carbonic acid from the blood
while about an equal quantity of oxygen is
taken up, thus changing venous into arterial
blood. The importance of this function may
be inferred by the wise arrangement of the



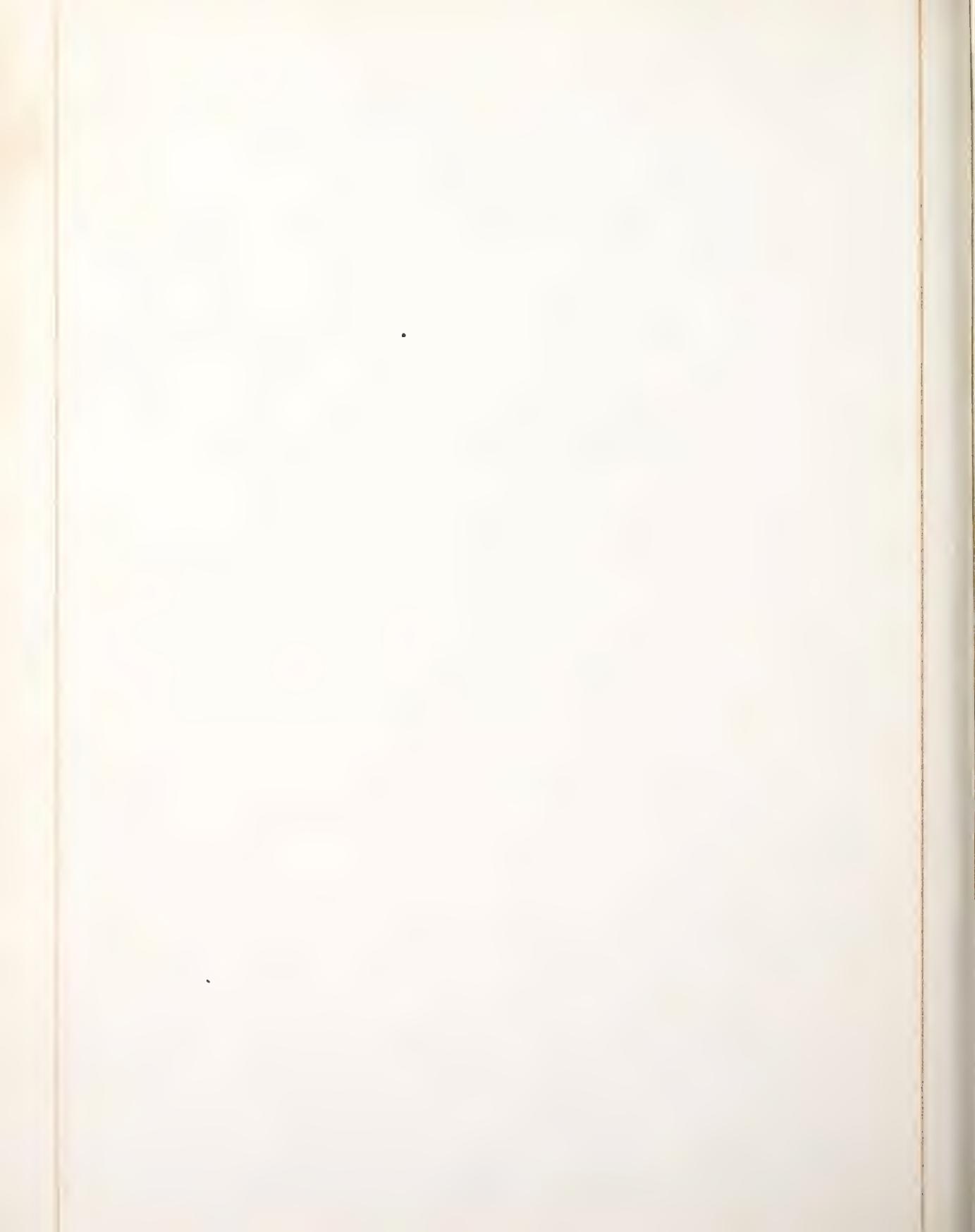
Great exertion in breathing is under the control
of involuntary nerves; not only so, but it can be
beyond the power of the will to a certain extent;
for though the will may restrain or stop the
wheels of life so far as to restrain consciousness
and consequently the will itself; yet, still,
the respiratory nerves will assume the command
and perform their functions again.

The muscles employed in respiration are the
sterno-abdominal, the Trapezius, the levato-
rii, and auxiliary, and Diaphragm; all of which
except the Diaphragm are actuated by the external
respiratory nerve. The use of the Mastodons
are in common respiration; but more especially
in excited states of mind in singing and laugh-
ing; but the Trapezius must act first and go back
and back before the Mastodon can act in respi-
ration; also the aid of the Trapezius is needed to en-
able the serratus to elevate the ribs in inspiration.

These nerves are provided for inspiration.
This exhalation, for it requires more number
of acts and it is more essential to life;

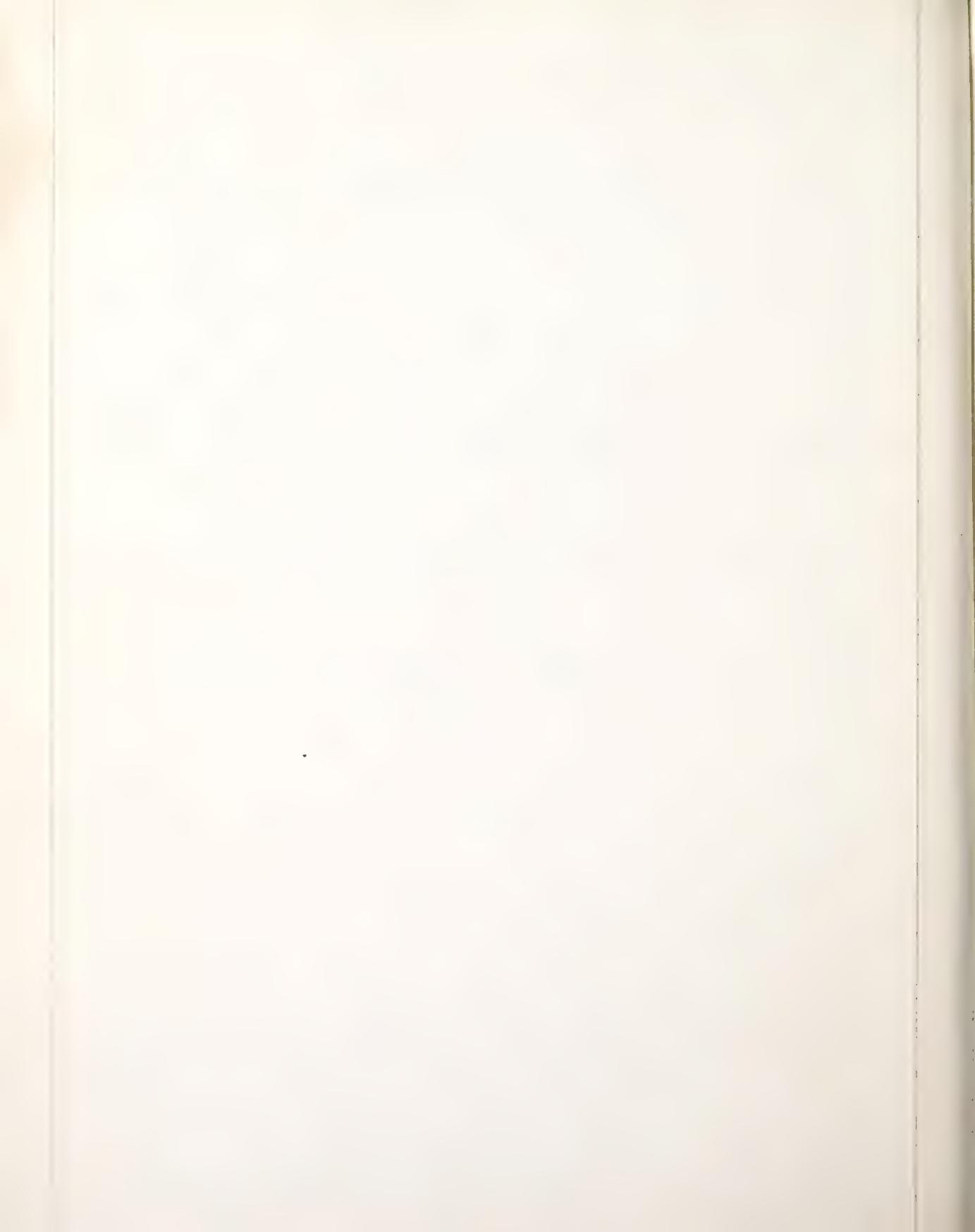
The Paroxysm never leaves the Diaphragm
To contract enlarging the cavity of the chest,
but the pressure of the diaphragm forces it back to
its normal state. The spinal respiration and extra-
nal respiratory nerves ^{and} the muscles that
elevate the ribs, but their own insufficiency and the
weight of the paroxysms, will bring them to their
former condition. But if the respiration become
obstructed so as to produce suffocation the diffi-
culty is with inspiration; the same will attend
when the last sands of life are running out,
exhausted nature struggling with a convulsive
effort to resist the fatal hand which is
extinguished with exhalation.

To the respiratory nerves must be referred
that striking characteristic of man called the
expression. In countenance or in voice of the
soul. This shows the hidden workings of the
inner man. Does joy gladden the heart and cheer
the mind, it is seen in the glow of the face
The eye and lighting up the expression; or
does sorrow fill the visage with the gloom



and drink up the spirit. The act is depicted
in long lines upon the usage of the unfortunate
one; or have the baser passions rule and
has anger driven reason from her throne; it is
shadowed forth in the countenance in char-
acters not to be mistaken.

The eyes and their appendages, the fore-
head and the muscles around the mouth
are the chief organs of Expression. These are
all supplied with a rich sensitive
nerve. Many experiments have been made on
the lower order of animals to see that the
Portio dura is not only the respiratory nerve
of the face but also the grand nerve of the ex-
pression. The respiratory nerve being cut in
a Terrier the side of the face was deprived of
all expression whether in the act of fighting
or craning before his antagonist. It is on
this nerve also passes to the ear, our main con-
nection, or man or animal, has the ear with the
expression. This can better be seen by ex-
periment for I dare say the better we live



This is the principle organ of Expression, and its effects are very striking.

Much may be learned in Diagnosis by closely observing the countenance in different diseases. Pain always produces a peculiar contraction of the features, varying according to its severity and intensity. We have failed to observe that peculiarity of expression attending unilateral Congestion. Every one, however, an attention to and, if necessary, may even perceive in the contractions of the face in what organ or what class of organs the pain is situated.

A thorough knowledge of the nervous system is necessary to make a correct Diagnosis in many diseases especially of the neuralgic kind; for neuralgic affections can only be relieved by ascertaining the original seat of the complaint and applying the remedies thereat.

Operations have been performed on the sympathetic nerve of the face for the dangerous without producing any effect of course, other than exhibiting



The skill of the operator; and tumors in the neck by compressing the nerves have caused difficult respiration, which has been observed in the trachea. Again the gain of dissolved venous air is often felt near or the issue of the vessels, but in parts to which the nerves are distributed. A case is mentioned in which a local affection of the dura mater was mistaken for an attack of apoplexy, where the patient after having undergone the infliction of bleeding, purging, and starving, was suddenly cured by the bursting of an abscess in his ear.

In conclusion it may be observed that much benefit has already accrued from the application of the nerves, made within a few years and every power of humanity must rejoice in the advancement of the Philanthropic Profession of Medicine.

Wm L Bliff







IV

Dissertation
on
Rheumatism.

By

Benjamin Franklin Bradford,
of Mountville,
Candidate for the Degree of Doctor in Medicine

Sithisulmonalis

Submiliary Consumption is a disease that consists in a gradual wasting of the whole body, resulting from a peculiar pathological condition of the lungs, and has been the theme of much speculation with medical gentlemen in every age, since medicine became a science; and the day has not yet passed when the valetudinarian may not seek in the medical world for some means of prevention or some Remedial agents for the relief of its unhappy victims.

Symptoms

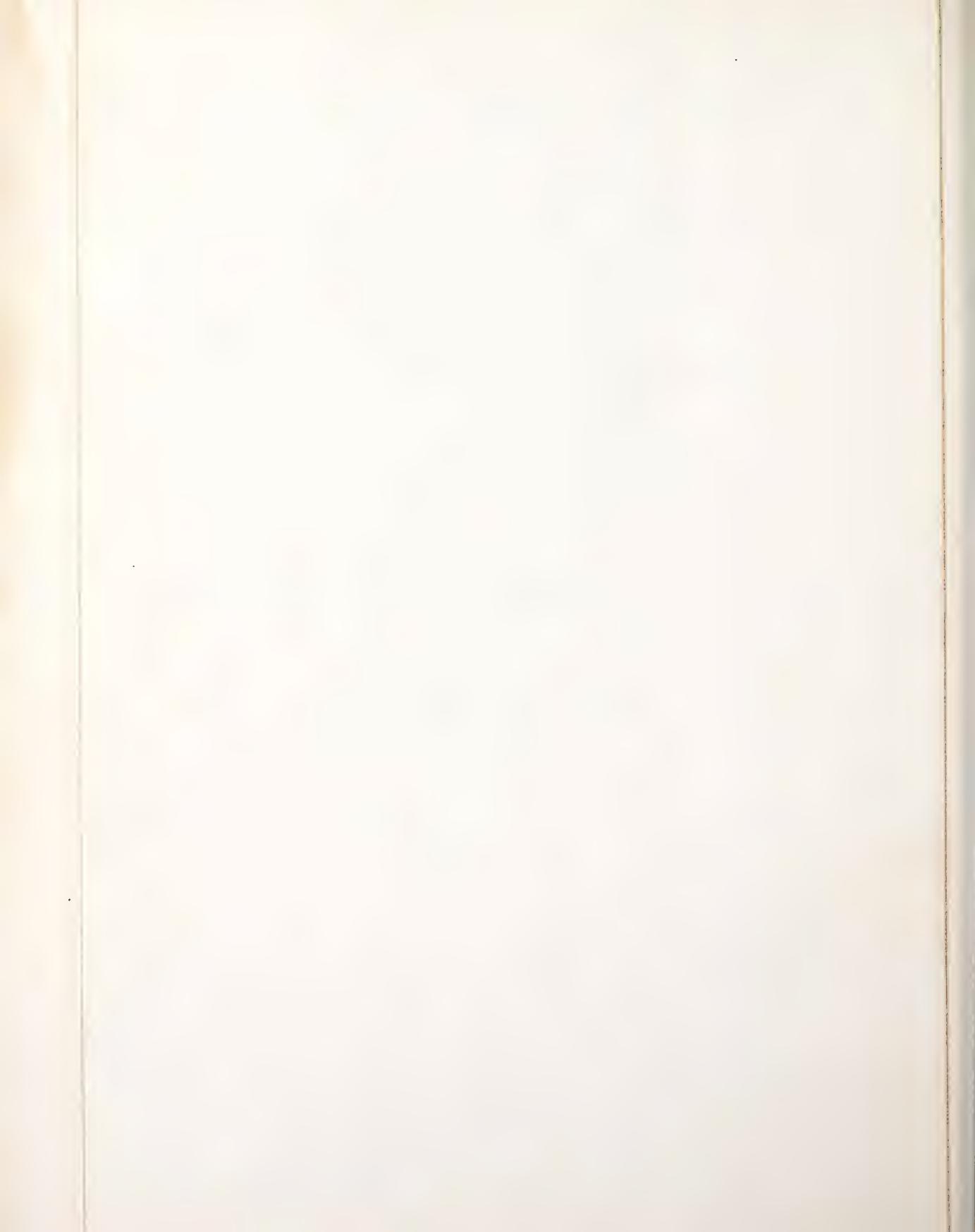
Op.

The commencing symptoms are a slight fever, increased by the least exercise, with a short dry cough, frequent pulse, uneasiness about the dia phr agm,



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moderate heat, lassitude, wandering going
and stiches about the whole system, espe-
cially in the regions of the Throat, respi-
ration hurried on slight exertions, a gen-
eral indisposition to exercise or motion
of every kind; supernatural ligness of the
skin especially of the portions of the hand,
and soles of the feet, a peculiar flush in
one or both cheeks about once in twenty
four hours; deficiency of appetite, with
many other dyspeptic symptoms, ap-
petite however remains to disquiet that they have
any consumptive symptoms, or of believ-
ing that they have any serious disease
even when the strongest medical cases exist;
and strange as it may appear amidst
all the misery of consumption the patients
hopes of recovery are seldom abounding,
and even increases as the fatal termination
advances.



The secondary symptoms are ushered in by all of the preceding symptoms becoming more aggravated.

The cough at first, unattended by any expectoration of consequence, is now attended with the raising of phlegm from the lungs, especially in the morning; The expectoration by degrees alters its appearance; its quantity is increased, it is less transparent, and at length yellow, or greenish, and finally assuming a purulent or corrupted appearance. Gynaecia is one very prominent symptom.

Hectic Fever, and Colliquative sweats succeed one another and are of greater moment.

Coldness of the lower extremities, and even suffusion of the hands and face are circumstances which seldom fail to appear in this disease.

Diarrhoea and convulsions puts an entire stop

Cause

Multifid and varicis are the causes assigned as giving rise to Phthisis by writers without leading to any good practical results.

The result of obstructions in the lungs, is in my opinion; the consumption, and these obstructions consist in; and is depending in almost all cases; on the existence of small tubercles in the substance of the lungs.

Tubercles in the lungs may, and in fact do remain for a great length of time without producing any serious inconvenience to the patient.

But there is, and always will exist, a strong predisposition in such an individual, to take on consumptive symptoms however well he may appear, and the slight irritation of a slight cold; which in others would not be noticed; will in him produce all the ravages of consumption,

It once whatever was a tendency to increase the circulation in the lungs operates as an exciting cause of consumption

Treatment

The treatment of consumption (from its pathology) naturally divides itself into

1st The preventative agents in many and

2nd The curative measures to be followed and

3rd The palliative remedies

1st The preventative agents, I have but one, and that is almost a specific, and that's universal truverance in all things

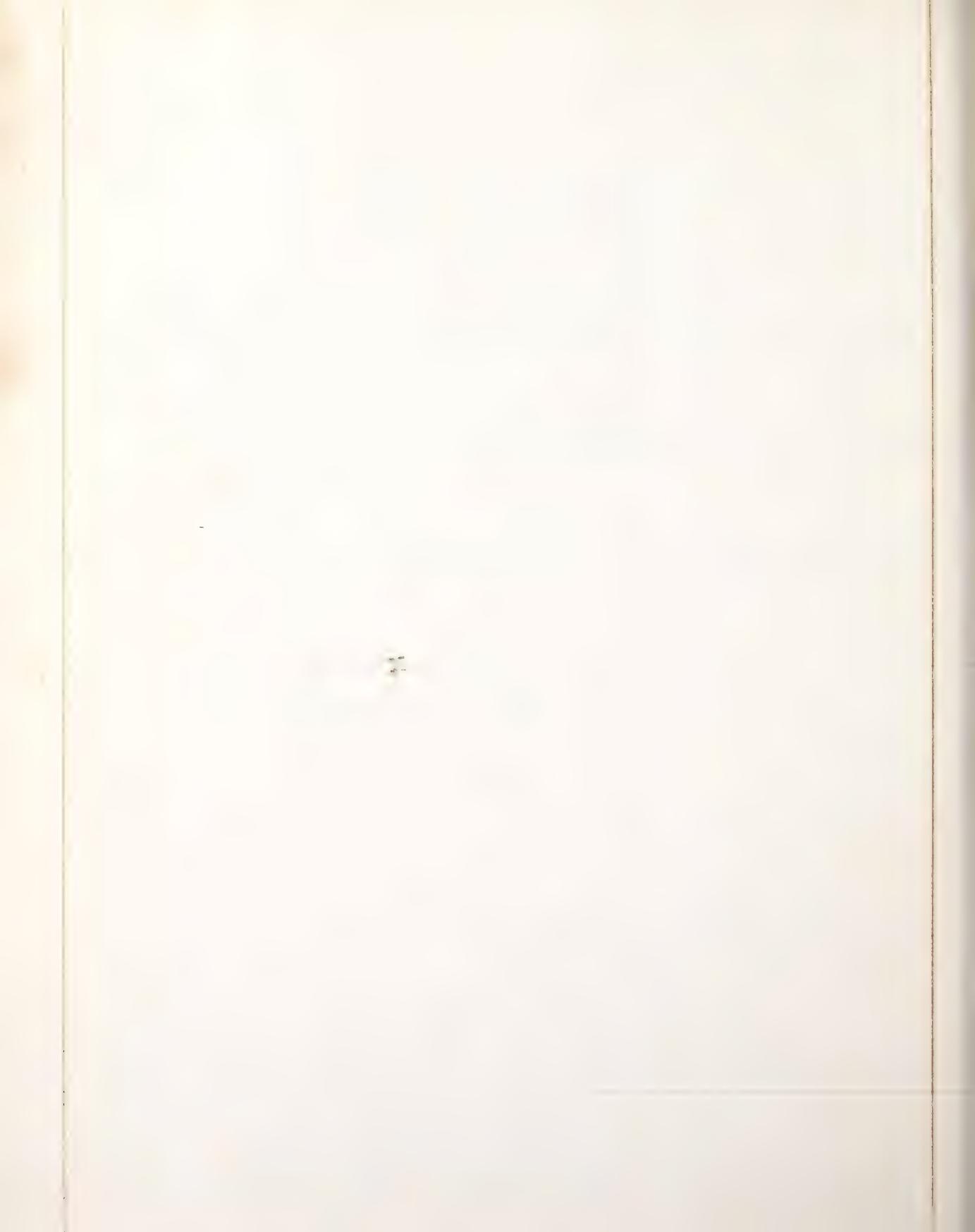
Remarks

I know that Indigestion is the attendant hand-maiden (in most cases) of Consumption and is the first symptom that shows itself, and it is a pathological fact that indigestion destroys, or impairs every healthful function of the animal economy, when aliment is taken into the stomach in too great quantity or not in a proper state; or when its quality is unwholesome.

The coats of the stomach act upon its contents to produce chyme, but in vain does she try to manufacture healthy chyme. She is surrounded with an unbecome guest, over whom she can have but little power, and when the physiological laws of nature demand of her, her usual quota of proper chyme



for the formation of chyle, the stomach
is necessitated of resigning up what will
the health for that purpose, which is a
mass of noxious vapors, and acidic
poisons, and the stomach herself bore-
ating with pain beneath her nar-
rowous burthen, the lactals (from
necessity) proceed to slake their thirst
from this fountain of corruption and
disease, and soon it is demanded of
them to render their usual quota of
proper chyle, for the formation of the
blood and the supply of the sanguif-
ferous system; such as they have, they
resign which is a mass of stuff more
fit for the drain; than for the blood
their function being impaire by its
noxious quality, and when the blood
is called upon for her usual nutriment
for the whole body she gives up what
is furnished her from the preceding

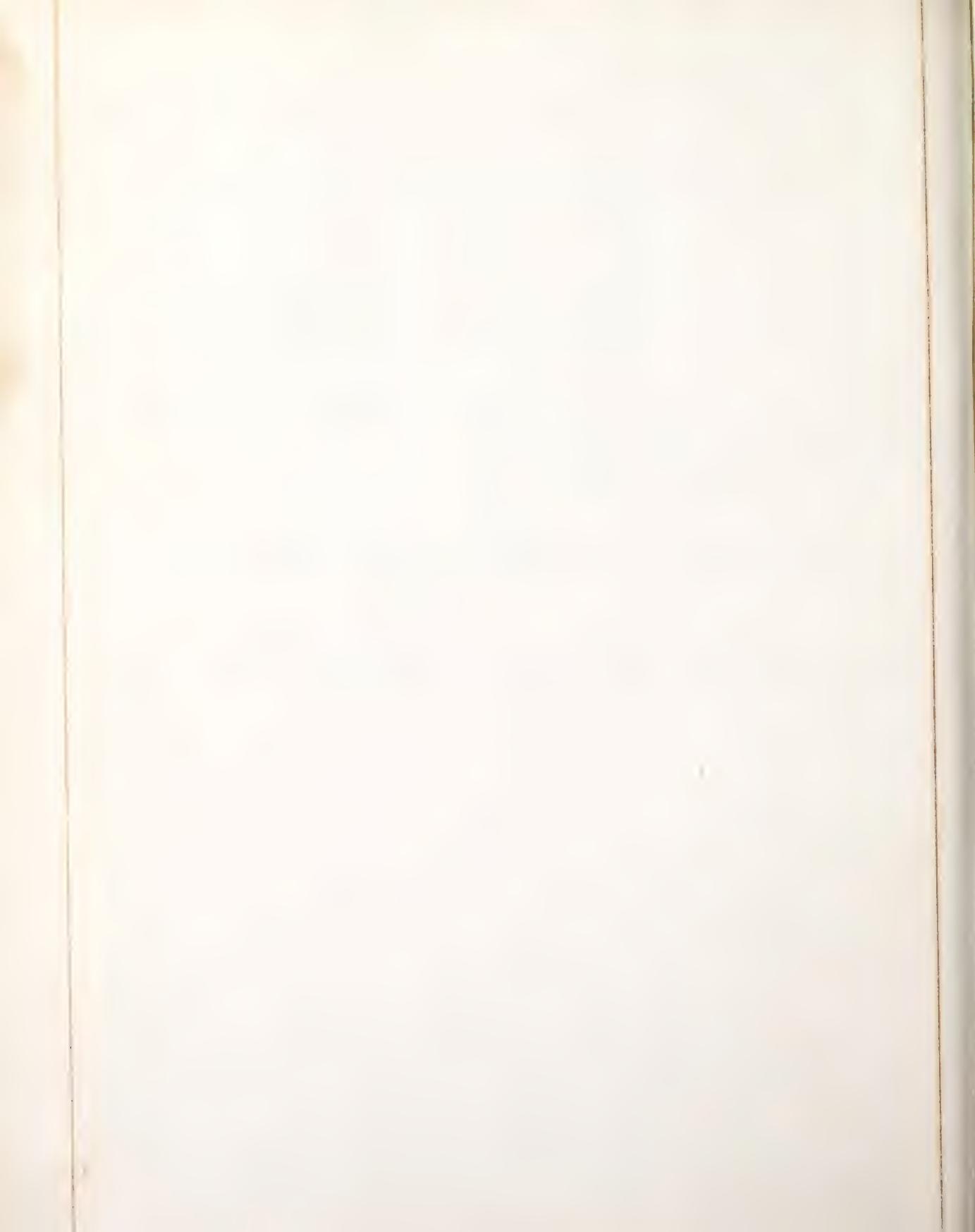


Consider

it well considering the oft and
repeated processes of nature in this
her course and the above formidable
obstacle to its healthful performance,
the result must be apparent upon
tuberulated lungs.

Never the great object of health is to
seek to supply the stomach with that
which nature simply requires and
avoids excesses of all kinds.

2nd The curative measures are to equal-
ize the circulation of the blood by
light and frequent bleeding, as the
system will bear, blisters and
counter irritants upon the surface
and above all avoid that which
is the exciting cause whatever it may
be, and to depurate the body,
which is done most effectually by

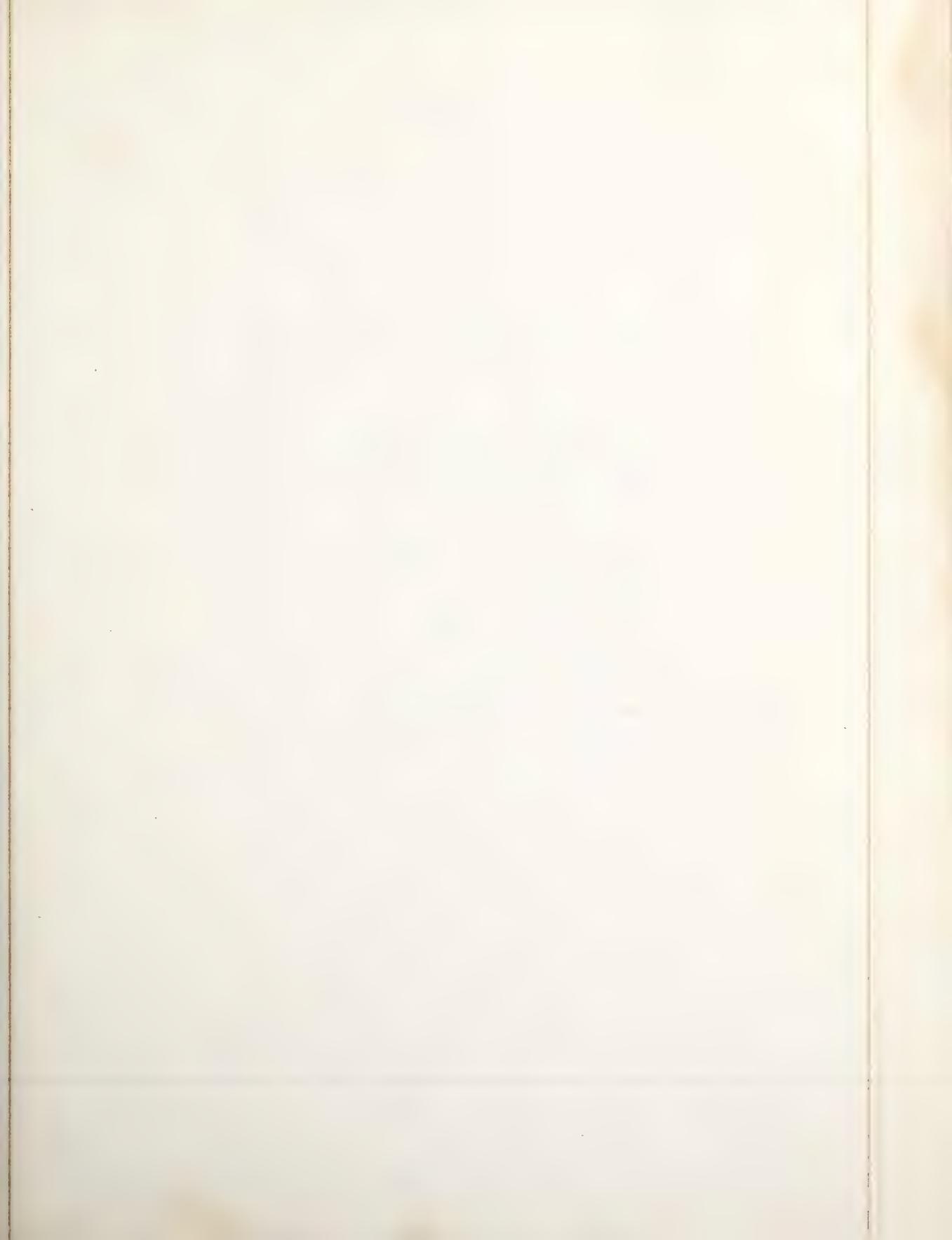


substituting wholesome food and
drinks for those that are unwholesome
and stimulating; by increasing the
tone of the stomach and bowels by
mild tonic remedies, and regul-
ating the other functions of the body
with their respective remedies,
Exercise in the open air as the
strength will permit & cheerful
company and conversations - the
daily use of the tepid shower bath,
friction with the fresh brush; Day
to be suited to the season, constant
use of flannel next to the surface
of the body; Issues and scatous may
be of use by diverting the blood from
the Lungs



3rd The Paliative treatment is much
of the above, with the more free use
of Anodynes combined with expectorants
and nervines, as the the present state
of the symptoms seem to indicate,
some of the astringents may be used and
above all avoid despondency in the
patients mind as much as possible,
by instilling hope, and so soothe and
prepare for the worst.







V.

Dissertation

on

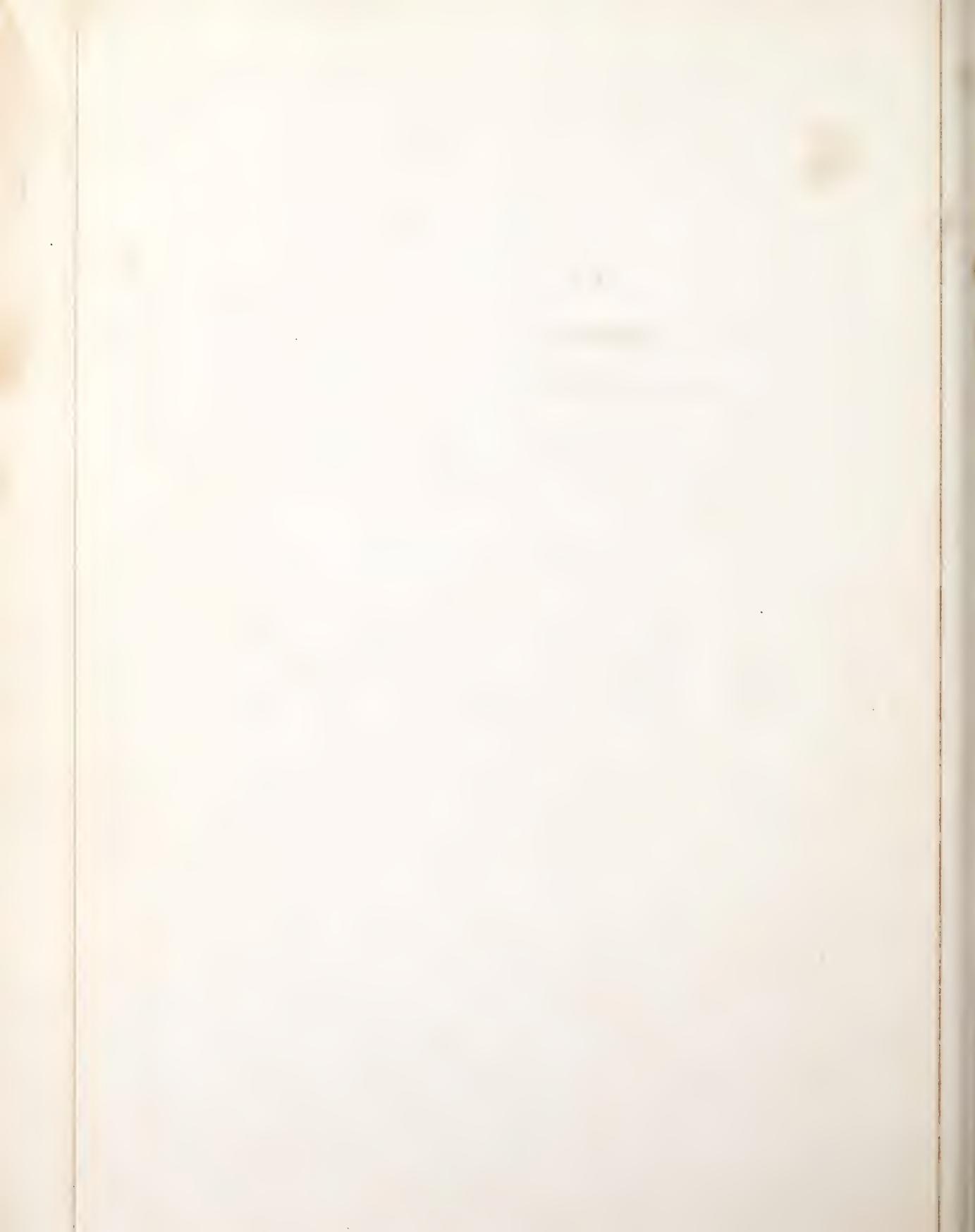
Laryngismus Stridulus.

By

George Elliott Bedington,

of New Haven,

Candidate for the Degree of Doctor in Medicine.



If the importance of any individual disease, is to be determined by its seat, nature, frequency of occurrence, the attendant distress, & the degree of fatality; then the disease of which I propose, briefly & somewhat superficially to treat, demands particular, & attentive consideration.

Laryngismus Stridulus.
is a disease, which has been known to & received the attention of medical practitioners & writers for a considerable period, & its dangerous indolency somewhat over-rated.

Its existence as a disease separate & distinct from Croup, has been a fruitful source of controversy & the minds of the profession are still unsettled in regard to its pathology & treatment; in fact almost every

writer who has treated of this subject, has different views in these respects. & each one has given the complaint a name to suit his own particular notions - Hence we have - In-ward fits, Spasm of the glottis, "Spasmodic Asthma," "Carpo-pedal Spasms, "Thymic Asthma," Child crowing of Gooch; & Dr John Clark called it A peculiar species of convulsions in infants; &c. &c. I will in this essay employ the term given to it by Good, which best indicates the seat of the disease & its nature

Laryngismus Stridulus. or Stridulous constriction of the larynx, from ξαργύρει & στρίδειο.

The essential symptoms of this formidable malady, consists in sudden attacks of breathlessness, caused by the partial or complete closure of the rima glottidis, producing of course partial or total obstruction to the ad-

mission of air, into the wind-pipe, varying according to the degree of closure. with a sonorous inspiration,

When the closure of the glottis is not perfect, the child struggles for breath, the respiration is hurried, the countenance is livid, the eyes staring & each inspiration is attended with a "crowing" sound. When the function of respiration is suspended, the child makes vehement struggles to recover its breath, at intervals of from a few seconds to two minutes; the air is at length admitted through a very narrow chink, producing the peculiar sound.

To these symptoms often succeed a fit of crying or coughing, which completely breaks the spell. & the paroxysm is terminated; but if the glottis be completely closed for the space of three minutes, the patient dies of asphyxia & he is said to have

aid in a fit"

Other symptoms have been enumerated by other authors, one of these is a peculiar contraction of the thumbs, fingers, wrists, ankles & toes, & lasting during the paroxysms.

Some writers consider this symptom as essential to the disease, but Dr Ley thinks that such effects are purely accidental & depending upon the paralysis of the extensors. Dr Good thinks it ~~depends~~ ^{shows} upon a want of balance of power between the flexors & extensors.

It is obvious, from the symptoms & effects already mentioned, that this disease is somewhat analogous in its nature to Asthma & Croup, but still with due care in making the examination, the diagnosis is not difficult - the distinctive marks or symptoms between it &

asthma, are that in asthma, the pain & constriction commences in the ~~lungs~~ Chest. & is chiefly confined there; though it may extend to the lower part of the Larynx, while in Croupy asthma tridulous the constriction & difficulty of breathing commences in the Larynx & mostly exerts itself there; though it may extend down the trachea to the Chest, in the former the respiration is wheezy, but not stridulous; while in the latter the voice is stridulous, the ~~inspiration~~ ^{respiration} is rarely wheezy or so to an equal degree, showing, evidently, a difference in the seat of the ^{two} ~~the~~ diseases.

But the diagnosis between this disease & Croup is much more difficult, as the general symptoms make a far nearer approach to it.

In Croup the presence of inflammation & the "peculiar concrete membrane-like substance" (of God) & the want of them

in U.S. is pathognomonic; as also the suddenness of the accession of a paroxysm of this disease; there are instances, & it is true, of genuine croup commencing abruptly, but they are rare, there are usually preceding symptoms, such as a slight cough & hoarseness, or if the patient were laboring under a catarrh. In croup also, once inflammation has ~~once~~ commenced it becomes a permanent cause of excitement, & struggle for breath continues until the inflammation is abated. in the disease under consideration, the spasm subsides so suddenly w^t it commenced, though it may return in an hour or even a few minutes, but in the interval, the patient is perfectly at rest. Croup is also almost exclusively a disease of childhood, while U.S. often affects adults.

From the history, I will now turn to the pathology of the complaint, & here

we find "the doctor disagree."

Dr Hugh Ley, thinks that the disease is owing to the enlargement of the absent glands of the lungs - we will let him speak for himself.

The cause of the crowing inspiration - is either an enlargement of those absent glands, which are constantly found at both sides of the lungs, both before & behind the trachea & the two bronchia & frequently blend with others, which lie upon the arch of the aorta & not unfrequently with the carotids, or a similar enlargement of the deep-seated chain of cervical glands, known under the technical appellation of glandulae carotinatae; The former may be enlarged by exposure to cold, from frequent catarrhs, disease of the lungs, pericardium or heart, from a strumous taint, & probably from an excretion of diseased action from the continuous cervical glands, which according to Haller & others, constitute a continuous chain with them.

In the adult, these glands when morbidly enlarged, may seriously interfere with the respiratory function & even instantaneously destroy life, by suffocation; in children when similarly enlarged, they may produce the crowning complication, proceeded or attended by temporary & sometimes fatal asphyxiation.

For the first hint of this pathology Dr. Lee acknowledged himself indebted to his dear colleague & friend Dr. Minimow, since whom he has had numerous opportunities for tracing the connection, in gauging & verifying by direct observation the relation which the symptoms bore to the diseased gland. He relates several cases to prove his views & theory & then adds, "I can with perfect confidence assert, that in considerably over twenty ~~six~~ successive cases, with one exception only I could trace the enlarged glands, from the commencement; or in the progress of the complaint, they rare ~~are~~ un-distinguished during

life, or discovered after death, & I may now therefore,
I trust, without arrogance assume, that enough
has been said to establish the proposition, that at
least, ~~in~~^{large} a Numerical Majority of instances, of the
Disease of infants are produced by the enlargement
of glands situated in the nose & influencing
the functions of the secretory nerves & sometimes
probably the paraganglia."

In this Dr. Ley is probably correct, yet the
same disease may be owing to other causes, it
may be effected by a morbid thickening of the
mucous membrane lining the cavity & pha-
rinx. -- Worth considering it an affection
of the brain - But we might go on almost "ad
infinitum" in enumerating different theories, ~~but~~
but my time will not permit, & I will only
say that the 1st evidence generally coincides
with Dr. Ley. —

But the most important part of
my subject remains to be investigated, viz
The Treatment of the complaint, & to this all
other considerations are subservient & they

become truly & doubly valuable, when they lead to practical conclusions, which will increase our power in controlling the disease.

We have seen that this complaint may be induced by different causes, so we must regulate our treatment, & the administration of our remedies, according to circumstances. If we should discover tumid glands, we should trace, if possible the cause of such enlargement, & in adapting our remedial agents to that cause strike at the fountain-head.

I will now quote briefly from Dr. Tey - "It has been seen that the connection between this disease & the effects; and the enlargement of the cervical or thoracic axillary glands, as the cause; is one of great frequency & intimacy & that the evidence of this essential connection, derives material confirmation from the fact: that the exciting causes of this peculiar malady are incisely those, which, according to the best authorities on such

subjects, are constantly producing enlargement of
these very glands — But we must not
conclude that such a condition does not ex-
ist, because we are unable to discover the tu-
mid glands, for they may exist in the neck
even, & yet escape our notice; while those sit-
uated in the Throat, will escape our detection
by an ~~external~~ examination, & Dr Ley says
that "In similar diseased conditions, commonly pro-
duce the same or similar results, we infer from the
occurrence of the latter the existence of the former."

But this particular pathological condition
of these glands, only predisposes to attacks of this dis-
ease & by again exciting causes to bring them
on; which may be inflamed & scab - dentition-
affections of the Mind, as fear or Anger, &c

Age & hereditary or acquired constitutional fa-
vourability; the former, of course we can not con-
trol, but if there is any predisposition to this
malady, double caution is requisite, to avoid
all things, which will be apt to bring it on.
Climate situation & season, are also among the causes

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you out the least influential; this disease is quite frequent in low marshy situations, but it is infinitely more frequent in crowded cities & large towns.

The regulation of the diet, is also of great consequence, the child should always be ~~and~~ scared from the breast; especially when family predisposition exists, & if from disease; or otherwise, the mother is unable to perform the duties of nurse. a wet-nurse should be provided. Dentition is by far the most frequent local cause & hence the propriety of freely lancing the gums of those teeth, which in regular order are next expected to appear upon this all winter agree.

Straining of the body or violent exercise, putting, cough, indigestible & irritable articles of food within the stomach or bowels & may induce a paroxysm. We should endeavor therefore to prevent or counteract the operation of these causes -

Besides attacking the predisposing & exciting causes, we should give our attention to breaking up the paroxysm, as speedily as

possible, which may threaten death by suffocation.

The child should be put into the warm-bath. (of about 98° Far.^h.) & continue in it during the paroxysm; or for 10 or 15 minutes at least & while in the bath sprinkle cold water on the face & chest, ~~which~~ is followed by a short inspiration & a lengthened expiration; which in turn is succeeded by a fit of vomiting; & the paroxysm is broken. It is also well to apply ammonia to the nostrils & also, by irritating the pharynx with a feather or the finger to produce emesis. Millar says that purging will stop the paroxysm; but we have not time to wait for the operation of a cathartic; an enema will generally suffice; to which may be added assafoetida or turpentine (if at hand.)

The nurse to save the child from impending suffocation; places it strongly on the back, or shakes it violently & although it answers the induction; she does not know that it acts upon a well

known principle; it causes the child to cry; which is an explosive expiration, & of course opens the glottis.

Frictions on the Chest & abdomen are also useful; but these should be employed while the child is in the warm-bath.

For the ultimate cure of this disease; un-
doubtedly must be employed, during the intervals,
between the paroxysms - Dr Marshall Hall
causes, that the gums should be pulpy & frequent-
& lanced; without reference to the teeth; he pro-
hibited it to be used daily; to correct the state
of the blood vessels & nerves. In the case of
glandular enlargement; if it should be
acute & there be a tendency to suppuration,
it should be encouraged & the abscess opened
as soon as possible; if, on the other hand it
should be indolent; its absorption should be
attempted; & with this object in view iodine,
or its salts must be exhibited. The two great
remedies relied upon by Dr Memmikan are
ista & burnt sponge. The latter uses its ef-

ficiency to the iodine which it contains & so-
da corrects acidity, which is so fruitful a
source of bowel complaints of children.

But it will often be the case, that after
the most judicious treatment the complaint
will remain unimproved; in fact it may
be growing worse & then change of air &
place is urgently indicated & for this partic-
ular instance; will act almost as a specific.

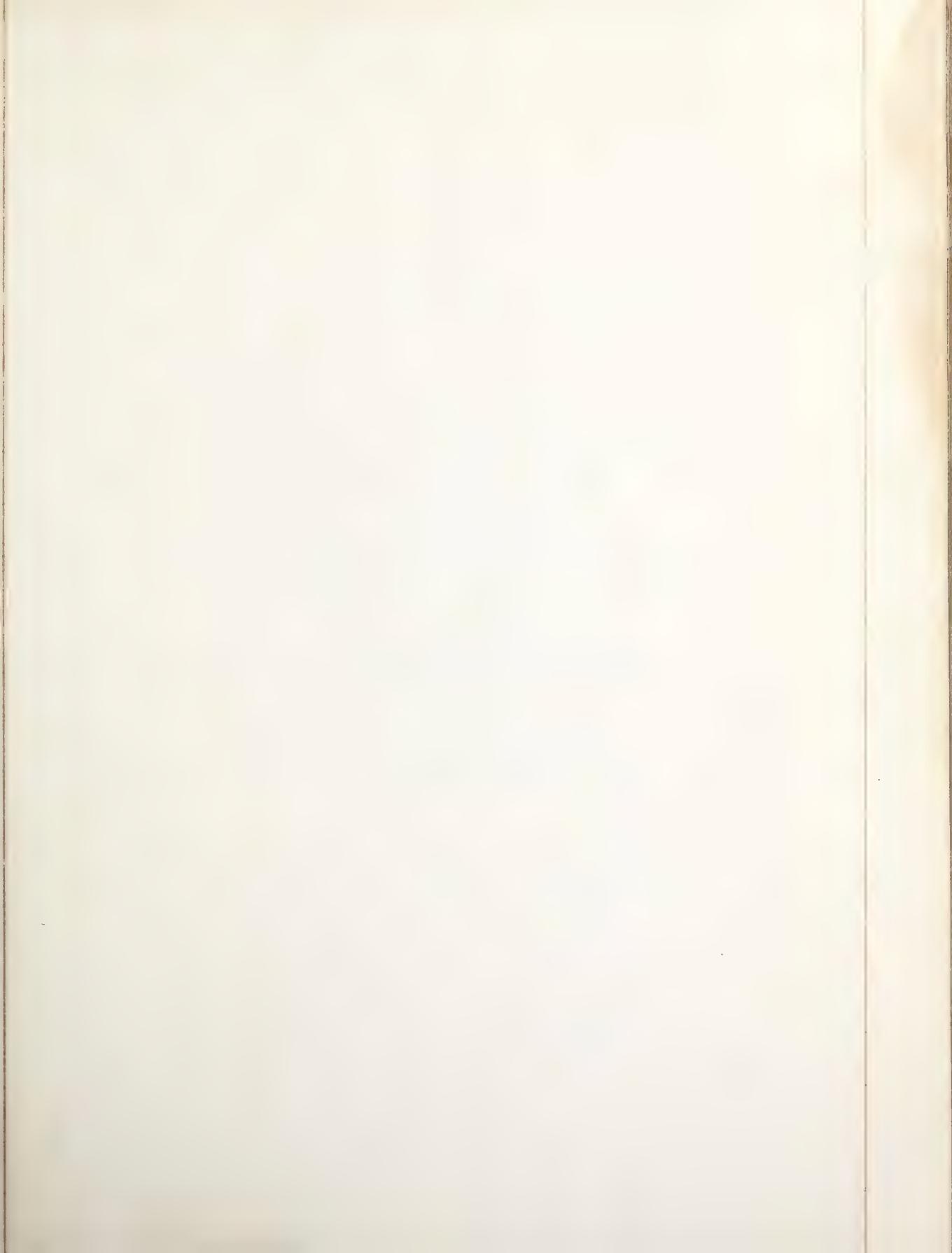
Dr Ley mentions an instance, when after
the use of the usual remedies, there was no
improvement, he recommended a removal
from the city to the country & the benefi-
cial influence of it was immediately ~~felt~~
apparent; the parents supposing the child
cured, returned to the city; & immediately
there was a return of the symptoms!

It will often require, the most judi-
cious treatment, aided by pure coun-
try air to effect a cure of this most ob-
stinate complaint.

But I have trespassed too long

already, upon your time & patience,
& in concluding the treatment of this dis-
ease, I will repeat the advice of
Prof. Newell of this Institution. Often re-
iterated in his lectures. "Prescribe
for the symptoms as they occur."

Geo. Elliott Bedington.





VI.

Dissertation
on
Apoplectia temulenta.

By
Nathan Bulley,

of Fairfield,
Candidate for the Degree of Doctor in Medicine.



Hopisia Simulata.

This name is

worthy of consideration, because it is
an appropriate one, denoting both
the beauty & the mimicry.
The two are so closely connected
as to render it difficult to separate them,
and I shall therefore do so
as far as possible, & then proceed
to speak of the bird, & then of
the mimicry. I will first speak
of the bird, & then of the mimicry.
The bird is a small, slender
specimen, & its plumage is
extinct as to color, & there is
no distinct rufous or orange,
but the body is yellowish,
the wings & tail being
slightly mottled. There is
nothing remarkable about the
feathers, but the bill is very
long, & the legs are long, & the feet
are large, & the claws are strong
and hooked. The bird is very
shy, & is easily frightened, & it is
not often seen, but when it is
seen, it is a beautiful specimen.

What & what we do & the way we do
it will tell us the present & the
beginning of the movement to come. It
will stand to account, but it will
not impress in mind the mass, & in
advising it when present, will decide in
part by the example & talk in part & in
the judgment.

Intoxication even in its mildest
of expression form is a greater curse &
danger. At this first very meeting, it
seems evident - for how often has it
been called upon to measure our abilities.
The direct & only cause of this is it is fa-
cile to the individual to be of violent effects.
It may be the fault of the party to
introduce, or as the example of a bad
individual. But the fact has in
no way failed to show his leaders to be
less than members of the race. & in a
series of frequent habits, what power is there in
a strong nation to live & flourish, & in a

4. Some will be affected; while in
the Anterior Hemisphere & others the
Posterior Lobe will be more frequently af-
fected is the opinion of the author. — In
one or two persons I have seen.

Causes of Accidents.

The direct cause
of the disease is the irritation of a portion
of the optic nerve usually called the
Optic Nerve. & its branches. & there
are many circumstances which may be
considered as contributing to the de-
velopment of the disease. There are
Local causes, which are called local & they
are from the skin glands; the hair &
liver, an infection of the spinal fluid, which
becomes irritable. This condition is such
as to render the previously susceptible to
its impressions which are to form of the most
tender & sensible nervous, & that they may receive
every impression. They are induced to
with the result of disease, & it has

become a little less anxious that the inter-
views of St Louis the only end of living.
Early religion is moderately ignorant
of popular forms of Christianity; & we can
readily perceive that the persons we from
the childhood have been accustomed to han-
dle the great majority & especially when their
children are being & destined to minister
in after years, than those who have more
been educated in the & grammar &
& the law. It is impossible in my con-
dition to cease of the slave practice,
when the slave himself is called
white, is not always able to recall his hor-
rific circumstances. It looks true when asked
what he is - He will point to it
as his business - top of property - diffi-
cult in family matters; & to professing
Cures & Works of every kind, as the easiest &
readiest to cure the depriving sickness
& accid. to & his own statements an off-
shoot to as a slave & child, but it is

habit which has got established on the same
now to destruction's rear, which tends now
to form a & deeper & deeper, etc., often
in its course as a danger, he & also finally
will fight intrinsically in 15 letters.

Opinions.

The first symptom of disease
is mental exhilaration, unusual gaiety
& exultation, & the writer to you as be-
ing overcome with joy, pity & sympathy, this
is rather of less, & disappears & declines to the
second & the helpless sense, after passing
thereby, the appearance of unmodest acts,
drinking, taking heavy tasks, juggling, thin-
king, taking this & the other, breaking all
the can carry their hands on, & the perfor-
mance of all sorts & kinds of extravagance.
The sun will rise in the east, measured ac-
cording to the grammar, especially to us
which will be exceedingly bright, a degree
of heat, the day becomes suddenly, there
is now an increase in the temperature & the

when taken hot, to become & remain
a fluid & easily, & to a greater
degree & more & more impeded, the pulse
will become & continue.

It is to this & I consider means
exerted, & has continued for a long time
time, varying according to the amount drunk,
the circumstances under which the individual
is placed, & the degree of temperature to which
he is exposed, for excretions will increase & en-
large the stool as exertion goes on, & so to
the loss of water as he is exposed to the
sun & exhaustion of the more advanced parts.
With a long or shorter period the same
local mental depression associated with a
depression of the brain & body, & the
sight, & the sense of taste & smell in-
creased & more & more is sent from the
parts, which causes, no doubt ideas, & less
of the power to perceive & to act easily. When
the action is violent & steady, the
loss of consciousness can take place & such

skill & ability is required & failing to do the
introduction to any drug may be entirely
useless & the result, the introduction is ob-
noxious & laborious. ~~so~~ ^{the} ~~most~~ ^{most} difficult
such an item of the more common symptoms
attending such introduction, if ~~it~~ ^{it} occurs
~~before~~ ^{before} the large quantities of alcohol
are introduced in a short time that induces
falling down & convulsions in especially
when the person will be full & brought down
from such introduction, is the brain air or
inflammation.

Now, as the diagnosis is based on
the patient's statements, there may
be cases in which it is hard to determine
whether there is or not, it will be extremely diffi-
cult to distinguish it. The symptoms - a slight
loss of consciousness, or stupor, & especially
the condition of faint & rapidly becoming
consciousness, in addition, that the patient
can sleep with the eyes closed & will often re-
main sleeping ^{or unconscious} for a long time -

Extreme cold will stop, & we get to the
Sparta limestone to the south of the city &
there is no water about. The soil of the country
is too dry & sterile to grow anything
it is in the chalk rocks in these areas that
it exists. After a short walk, the chalk
comes into view, & a few miles off the town,
ranked like small fortresses, & dotted here
& there with villages & towns & about 5
days from Spartia to the Chalcidice & the
city of Leontes, & the Chalcidice is the
part of the land which is most like the high
mountains. From Sparta the road is
to ride for an hour in each bus. and
the first 2 to pass through precisely Sparta,
a place where nothing has been built
for the town, & in which there are a few
old & rising platters & the houses, & the
wall & foundations, are all stone or earth.
In cases a clay intercalation when the earth
soil is present as it sometimes is the limestone
is perpendicular & the town is built upon

a case in Shandlo have no pride to do so -
the time is often right to do it in the
agnosis.

The prognosis in drowning cases
is always favorable, all the ill-effects usu-
ally passing off in from two to three
days. It is well however to have an obser-
vation period than this is required before all
- patients are considered to be recovered
or out of danger. It would be better to be
very safe, indecisive, or even wanting in confi-
dence at first, as it is better to let the
respiration be much suppressed, laborious,
and irregular than to let it continue
excessively and abundantly. To some degree
it is better, cold - or at least to have
less respiration, as if this will considerably
unfavorable -

Appearance after death.

The external appear-
ance of the body of a dead body after
a fit of deep intoxication, very rarely dis-

tion of death from asphyxia. The face
will be livid & pale, & the skin will be
dry & those parts which are moist present
excessive perspiration. The eyes
will be prominent, & the pupils dilated.

The Stomach.

The first effects of alcohol on the
stomach of a man since it has been in
consideration are all to give a sense of
excitation, muscular excitement, & all
the nerves. The appetite is lost, & nothing
but all agreeables to health & pleasure can
be taken. Alcohol, however, does not
act always. This excitement however, if
continued, will be followed by depression,
which will result in the irritability of the
parts of the stomach. With regard to the stimu-
lating power of the stomach Dr Beaumont asserts,
"After ardent spirits had been thus drunk, an
adult male took the stimulant dose of
alcohol, but was upon this occasion & - ,
while unconscious, vomited & defecated,

~~to the body & limbs~~
muciferous matter exuded from the
diseased surface. These morbid changes &
conditions are seldom indicated by any
external symptoms, or particular sensations
describable or complained of, unless when
considerable supp. Thus could not in fact
ever been anticipated by any external sym-
ptom & the condition was only discovered
by ~~the~~ ~~other~~ ~~other~~ ~~other~~ ~~other~~ ~~other~~ ~~other~~ ~~other~~ ~~other~~ ~~other~~

From the continued use of alcohol the mucus
secreted becomes coagulated &
turbid, so will be expectorated, often
in a very watery form & adhering
to a drab. The mucus will also
be covered with dark colored blood. Small ulcers are often
found on the larynx & trachea - In such
cases it is said the whole of the mucus mem-
brane has been replaced by a granular mass
of incrustation & loathing.

The Liver.

When the brain dies a remarkable
process seems to take place in the
liver. It becomes pale & shrivelled &
loses its weight & volume rapidly
while the colour of the liver and surrounding
parts becomes yellow & finally if
left the liver is yellow. The shrinkage
is a remarkable operation & seems that
is natural & the body can give & resist such
a loss of blood.

The Liver.

The liver is also a remarkable
organ of preserving & saving blood
& seems to do so particularly well. It is
often stated that the lungs & heart
pump up less blood to the liver than
are taken up by the kidneys & the liver
receives the greater & retains of the oxygen
& medical men for almost all believe the
liver to be the pump of the body

the lungs there is almost no other organ
affected as at present by the disease.
They are large & have got up to a rather fat &
soft & somewhat dampened consistency with the
delicate mucous membrane of the bronchi &
air cells, & by its visiting attacks makes
cough. This irritation constantly & re-
volts his desire to interfere with attacks, &
the desire to sleep & to eat & to drink
continually induces an effect similar to the
irregular condition of the lungs. They
are covered over with a thin & watery
deteriorate & not so, blood loss. The pro-
ducts from & to lungs are like fresh urine
in a repulsive condition. The patient when in
such a state & shall add to the fat, until
it has lastened so that the ring can be
easily forced through it.

The Heart.- This viscus is generally found in a
decreased condition, the muscles being soft &
flabby. It is commonly enlarged but the ab-
sorption of air is diminished & rendered with great

The thick blood is distributed with difficulty
in the nose & pulmonary arteries. The veins
& large arteries are often opacified & when this
is the case it begins to become oblique.

The Liver.—This is the organ in the body to
which is subjected by disease to the least, even
in moderate attacks. It is usually enlarged &
swollen & its texture is soft. But in old chronic cases
the enlargement is often very great. It can easily be
diminished in life, though it is sometimes filled
with very bad clotted vessels, & is a constant & in-
creased state. The venous air is often cut through
undergoing the fatty degeneration & projects
a lip state. Occasionally it looks as though
it contained roots & fibres. From the arteries
nutrimentitious vessels take in the vessels of in-
gestion and this becomes in its function most
necessarily senescent. The liver's enlargement is
the general malady. Consequently we find the
individual subject to fits, debility & feeble health, & as
is perhaps more generally known an increased
secretion constituting a diarrhoea.

Treatment.

The first object to be accomplished
in the treatment of a Case of Ulcer of the Stomach,
is the determination of the nature of the ulceration,
that what you signify there is still remaining
as far as there is off. This is not always easy to be
done. If the ulcer is deep & large then the Stomach
is said to be perforated & it is liable to be
perforated. It is done by Stomach. The Stomach
is a large organ, which is liable to become
perforated. The question is it then be retained.
It may be reasonably known that the contents
of the Stomach are not & cannot be given off
at the bottom of the Stomach, as when a glass vessel
had been taken just before the liquor is re-
acted. So that the Stomach will not be able to
secrete mucus or mucus - This may also be
done when it is not necessary to admit the
contents, for the reason of infection will often in-
duce vomiting. When the Stomach is distended,
therefore to the top of the Stomach will often induce the
contents to come out.

Sickling T. runs into a few more days
with mounting fever & he has now
lost weight & is off his food. The
fever is high, a delirium is there & it may be
dangerous. When the temperature is much lower
& the excretion in colds is generally the
same in cold weather, so that I don't rea-
son very much about it. This is how
colds are taken & should be & this, but the
symptoms are such that they usually end up
all right. I think I can do just the same
as I did with the sickling, the only place
is a rather violent attack of cold & a lot
and it's then likely to be treated as a simple
case of cold & nothing, especially if it
is attended with a delirium & fever, for in
such cases, the pulse is generally low & the heat
is often ^{slight} & the fever ^{slight} & the patient
is dull & drowsy, the face flushed.
The temperature of the body will be high, &
then there is reason to suspect of the brain &
the lung. Examination of the sit, there may be a tapus,

The result of immersion is often
a decided improvement & is said to be
of great service in the treatment of
various diseases - especially those of the
skin & mucous membranes. In some
cases the quantity may again be given
in ten minutes after - It will sometimes be
necessary to remain quiet & respiration, the
breath will be a solutary excretion of the
body - It has been suggested that the inhalation
of ammonia might be used with advantage -
Experiments have been made with this medicine
& it is said, with complete success -
When the animal had been made to drink
the water & to bathe - it was introduced
into the eyes & the whole body immo-
bilized - The respirator aids as taught to
refers to drying & contracting vessels -
especially veins - The process of absorption
leaves the skin dry & smooth from a cold cause -
The water must be at 60°, & must be applica-
ed to the skin -

C Nathan B'ry

VII.

Desperation
on
Traumatic Tetanus.

By
Marcus De Forest,
of Woodbury,
Candidate for a License.



Hemimatic Tetanus.

Tetanic Tetanus, is a disease of the nervous system. And as its name implies, arises from wounds in some of the lipes, and those wounds usually which are slight, causing but little inconvenience at the time, are liable to produce the disease as those of a grave nature.

It is characterized by an extremely painful, tonic contraction of the voluntary muscles, attacking successively or successively all of the muscles of the body. Opisthotonus is a term which has been applied to that variety of the disease, in which the muscles of the posterior part of the body are affected, as to cause the trunk to be bent backward, in the form of an arch, the body being supported upon the arms and sacrum. I believe most writers on this subject, concur in the statement that this variety of the disease is the one most commonly met with.

When the muscles of the anterior part of the body gain the ascendancy and draw the body forward it is termed Imposthonus. Hemisphatosis is a variety rarely met with. It consists of a lateral

incarnation of the neck and body. This is a
numismatic whenever the muscles of the lower jaw,
are implicated, called Sooched-jaw.

A slight stiffness of the muscles of the neck &
those of deglutition, and a dryness of the throat,
was much the commencement of the disease which
commonly occurs between the seventh and four-
teenth days after the reception of the injury.

The patient being unaware of the true nature of
the disease, attributes his feelings to a slight cold, and
regards it as of little consequence. These symptoms
though common with many diseases, are often imme-
diately observed in the minds of surgeons, when the
individual who experiences them undergoes treat-
ment for local injuries. Subsequently there
is a violent, spasmodic, lancinating pain, which
shoots with the rapidity of lightning through
the chest, from the sternum to the spine, recur-
ring at shorter & shorter intervals, & is augmented
at last to an intolerable degree of intensity.

A feeling of pain and stiffness occurs in the
temporal & masticator muscles, and the jaws grad-

nally approach but without entirely closing, the tonic spasm holding them firmly in that position. The muscles of the neck become implicated, and owing to a balance being sometimes maintained between the flexors and extensors, its portion is kept in a straight line with the body.

The patient is unable to swallow liquids, in consequence of the spasm which has both shriveled & bent the muscles of the pharynx, but if he does accomplish deglutition, the effort is often so convulsive and agonizing, that he entertains the greatest dread of repeating it. Through the intervening space between the teeth, evades a viscid undiluted conditioned saliva. The trunk and extremities become variously distorted, & the face is miserably disfigured by the perverted action of its muscles, which draw up the nose, wrinkle the integuments of the forehead and drag the angle of the mouth towards the cheek bone.

The spasms about the muscles of the thorax gradually increase to such a degree that respiration is performed with the utmost difficulty and anguish.

This commence eventually performs a very important office in the extirpation of the patient's sufferings by death. Although the contractions of the muscles rarely cease so completely as to form an interruption, there are occasional convulsions which, as regards the mouth & jaws only, aggravate the horrors of the case. For it often happens during the brief separation of the parts that the tongue is convulsively protruded & not retracted in time to escape the closure of the teeth, causing a flow of blood from the mouth, which being mixed with the saliva and added to the disfigurement of the countenance, gives the patient a most frightful and hideous aspect.

The sphincter is variously affected. Thus the urine is sometimes discharged with great and sudden impetus during the vehement contractions of the abdominal paroxysms, at others it is retained.

The anus is in general most obstinately closed, though cases have occurred in which the contents of the colon have been expell'd in voluntary.

The patient is scarcely free moment from from
the most agonizing spasm, but notwithstanding
his extreme suffering the intellect remains
unclosed to the last, and the pulse rarely ever
rises to the height of fever. Perspiration is
profuse over the whole body owing to the violence
of the paroxysms. This continues during the
whole course of the disease, and has a peculiar
pungent odor. The circulation is at times affected,
but it is only secondary, from the violence of the
muscular contractions. Omitting this disease
there is always a torpid state of the bowels, resisting
the most powerful purgatives that can be em-
ployed. Partly owing no doubt to the excessive
quantities of narcotic medicines, which are
usually prescribed from the beginning, and
partly to a constricted state of the intestinal
canal.

After end of about 24 hours, the disease
has so far advanced that the patient is totally
unable to swallow. As it advances the form
of the muscles become distinctly visible under

The skin, visibly increases, and irritation is often apparent. The face is more and more discolored a cold clammy perspiration follows the fits, and the spasms are aggravated by the slightest motion whether for change of position, or to take food or medicine. The convulsions are few and of shorter duration, the dyspnoea increases, and death takes place, unclouded with joy even by the nearest friends of the deceased. Stark calamities sit in the estimation of the bystanders than his previous sufferings.

The time in which the disease usually terminates by death, is from two to four days from the attack. Hippocrates says, the third, fifth, seventh or fourteenth may be the fatal day. And we have on record the case of a man who having received a slight scratch on the hand, died of it in less than fifteen minutes. Such instances however, should not be considered as rare exceptions to the general rule.

Cause.

The exciting cause of this disease, is the local irritation of a nerve, produced by cutting, bruising, tearing, lacerating, or by any means in which a dissolution of continuity of any of the fibres is accomplished. Wounds in the extremities, and those of the fingers & toes often give rise to this disease, than those in any other locality. Surgical operations, as those of amputation, &c have been known to produce the disease. If in the course of a week or so, from the inception of the injury, be added the influence of a cold, moist, foul atmosphere, the disease is infinitely more liable to occur. When the predisposition to the disease is favorable strong and collateral circumstances favorable, the locality of the wound is almost a matter of indifference. No particular state of the wound, at the time of the occurrence of the symptoms, is necessary to the production of the disease. And no particular change takes place in the character of the wound,

indicating its approach.

Diagnosis.

The features of this disease are so strikingly peculiar, that they cannot be very readily confounded with those of any other.

It is necessary however to be aware, that hysteria which imitates so many formidable diseases, does not allow it always to escape her mimicry. Sometimes the representation is so faithful as to lead us to believe, that many reputed examples of successful treatment of tetanus have been merely conquests over hysterical spasms. A little attention however to a few of the peculiarities of the two diseases, will guide us in our diagnosis.

1^o The period of a copious fit of T.T. is more usually the 2 week from the exciting cause, or between the 7th and 14th days. T.H. comes on from the 2^o to the 5th days, rarely later than the 6^o or 7^o. 2^o The particular locality at which the muscles are first affected, is an important point of consideration. In

F.F. the muscles of deglutition and those about the neck are always affected first. In F.H. it is different. The affection first showing itself by a spasmodic action of the muscles in the immediate neighbourhood of the wound. 3^d In F.F. the jaws are never so firmly set, as to be entirely closed, usually remaining ^{firmly} open a $\frac{1}{2}$ or $\frac{3}{4}$ inch. In F.H. they are entirely and almost inseparably closed.

In consequence of the difficult deglutition produced by the spasm in the pharynx, and the occasional dread of fluids, taken in consideration with the aggravation of the symptoms by trivial excitement, F.F. has been said to resemble Hydrophobia. In F.F. however the mind is always clear to the last. In H. almost from the commencement, there is deviation from the usual habits of thought, and action, indicating mental aberration, which often passes to delirium or raving mad.

By careful observation then, and by the history of the case, the judicious surgeon will not be likely

to be led into error.

Morbid Anatomy.

In regard to the morbid appearances as laid down in most of the treatises on this disease, in my opinion many of them are accidental, they are by no means constant, vary in degree in different cases, I shall therefore make these few remarks ~~applied~~ to the treatment.

I regret that I can say nothing satisfactory in regard to this, I need not say, the most important part of our subject. That I can do little more than to recollect a series of defects incurred by almost every therapeutic agent that has been employed against the terrible malady under consideration.

The prognosis is very unfavourable the acute cases terminating almost unavoidably, fatally. Beneficial effects of medicines can only be had temporarily, to sooth the anguish of the sufferer, and his passage to the tomb more easy than it otherwise would be.

The emetics cannot to the extent to produce

undecided impression on the sanguine system, has been recommended in the beginning of the attack, being guided as to the propriety of the treatment by the constitution of the individual patient. It cannot be maintained that this treatment exerts any beneficial influence, otherwise than preventative, or auxiliary to other measures.

Narcotics are among our first remedies. One of these opium has been more extensively resorted to than any other, administered in powerful doses so as to produce narcosis. The warm bath and cold affusions have both been extolled by some, while by others condemned as prejudicial.

Mercury has been tried both externally, and internally and in combination with other cathartics. It has been thought by some, that if mercurial ptyalism could be produced, the disease might be ~~prodduced~~, but the patient in the acute form, (and this is the form with which I am dealing) goes out of the hands of the surgeon, without giving him an opportunity to produce the desired effect. Hydrocyanic acid,

Digitalis, and Tobacco have been employed to produce their prostrating effects upon the muscular system, in hopes thereby to relieve the spasm.

The actual cautery, & active irritants have been applied along the course of the spine, together with active caustics locally applied, such as Coros. Sub. Nit. Argt. Caustic potash etc. All the above remedies have been employed, together with amputation of the wounded limb, with the same uniform result, little or no benefit to the patient.

Purgatives are a class of medicines upon which we should place some reliance, both on account of the obstinate constipation which attends the disease, and because of the strong revulsive influence on diseases of the Cervico-Spinal centre. The quantities required however, in some cases, to produce an evacuation of the bowels, are almost incredible.

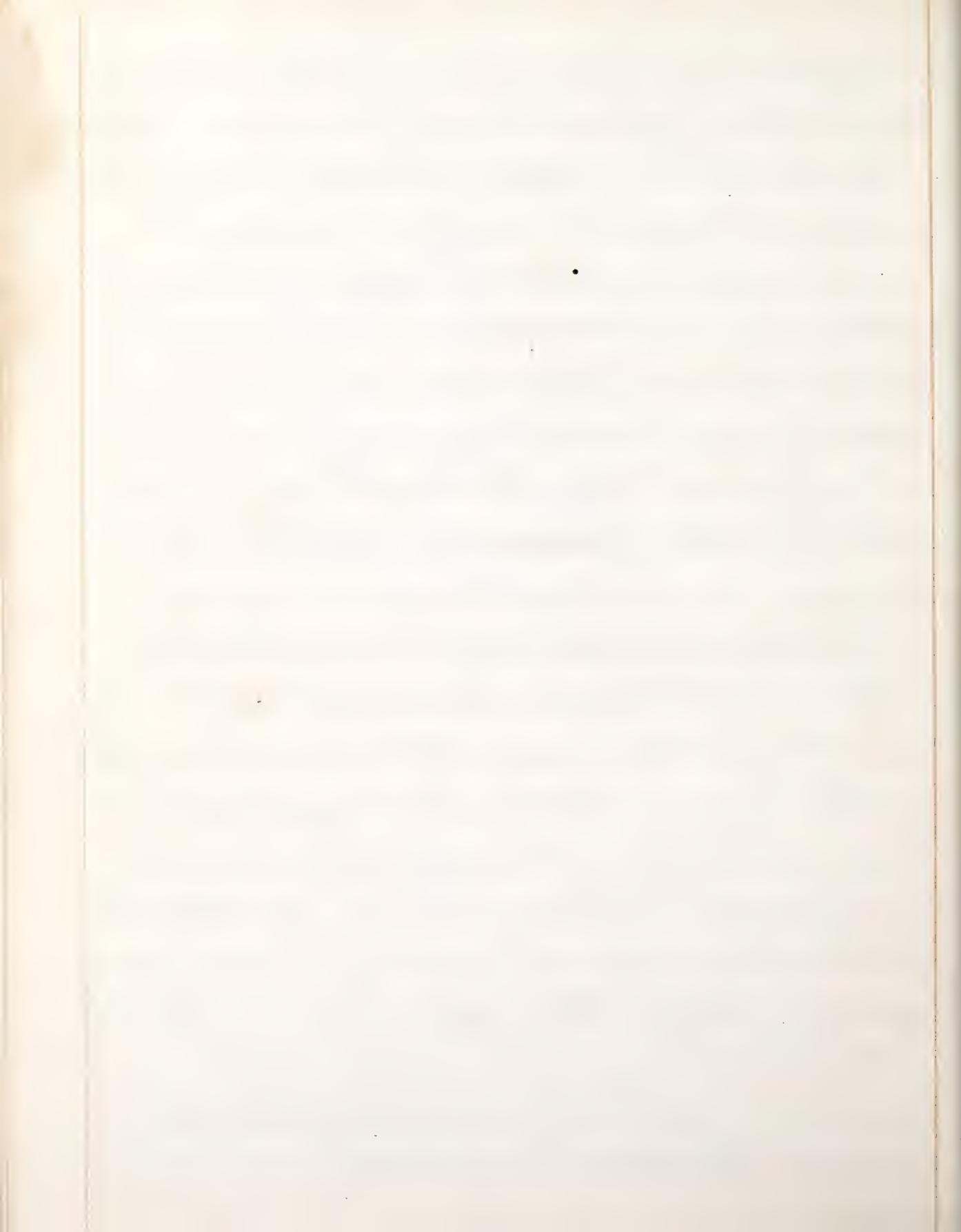
On account of the utter failure of all the remedies that have been hitherto employed in the cure of this disease, it has been proposed

to introduce into the system, a substance which has the property of producing on the nervous system, a condition directly opposite to that which is developed in Tetanus, viz. paralysis. Not, that the advocates of this plan, have become followers of Hahnemann, but that it is a simple and unavoidable fact that disorders are occasionally removed by remedies which have the power of producing similar affections. For effecting this object in the case before us, Strychnine in 1/4 of a grain doses every 30 minutes has been recommended.

The success of this plan remains to be seen. A hundred other remedies and plans of treatment have been devised, with an account of which, I have not thought it expedient to weary your patience, nor do I deem them of any practical ^{importance}, whatever. Such a multitude of alleged remedies as Tetanus has, is only a proof of their utter inefficiency.

M. D. Forest Jr.

New Haven Jan. 19th 1848.)



VIII.

Dissertation
on
Tubercle.

By
Philander Pheps Humphrey,
of Torringford,
Candidate for the Degree of Doctor in Medicine,



Tubercle.

The term Ambroise is derived from the Latin tuberculum, signifying simply a small tumour. It is now employed to designate a peculiar morbid deposit, connected with a particular pathology, termed the scolecoblast. The knowledge of the existence of this product is as ancient as the time of Hippocrates but for a long time past it was considered as a curiosity, as was first done by Galen. He spoke of it in which he said it had been observed that it was a singular change and called its quality scrofulous. The true nature of ambroise, however, was not known until the time of Ambroise Paré, and it is in this name of Ambroise Paré that we find the subject of the most exact and the most minute pathology of the age. These scrofulous have obstructed much that was of service to man in its pathology, but from the various opinions which have been formed with respect to it, it is difficult to determine its real properties.

Upon those points, difficult of demonstration, and considered by the profession as got up
without sufficient evidence, I do not venture to speak,
but I will say, that I am of opinion
that there is no such thing as a
rare antepueric investigation. That we must look
for a thorough knowledge of this subject.

The universal prevalence, and remarkable folly,
of those, who, with so little information,
and judgment, as it truly is, concerning
tuberculosis, &c. It is estimated, that it causes at
least one third of the mortality in the
human race. In discussing this subject, I
can merely speak from a comparison of various au-
thorities, state and medical, & my own. I have
not yet come to the offer of an extended
lecture upon your interesting subject.
The variety of forms of tubercular pathology
gives our many friends in the theory of tubercu-
losis, much difficulty, in a body va-
riety, mode of softening, and vascularit. The
causes of many of these differences are obvious. Dr.

Cornwall observes, that the form, consistence, and
consistency of tubercles vary with the seat of
the part in which they are, and the different pe-
riod at which they are made, their appear-
ance is to give the most changing circum-
stances, and hence cannot be uniform.

He has in his ¹⁰ letter spoke
of the white, and the granular, varieties of
the depositing tubercular matter. I suppose
the one in mother earth and tubercles in the
air. I have studied this granular state
of the tubercular matter, and I find it
permeated by the air, and this air is
greatly adapted for the act that it is com-
mon in other bodies, & it always occurs
with the variegated tubercle. Hence I have
concluded, that all the white and
soft, or white tubercle in the body of this
substance. The observations of Dr. Linné are
very striking, as he has never seen this appear-
ance. Such evidence however is only nega-
tive, and cannot disprove its existence.

the exact nature of the second form of tubercle, he considers it necessary to remark that
it is a tubercle, though in small number & size
varying from the size of a millet seed, to that
of a pea, & is the result of this variety
uniquely in conjunction with the first form
entitled both *Sacrae* and *Fausti* regard
them as the first stage of it. Bayle by whom
we may still find them considered them castellated
tubercles, and of a nature entirely distinct from
Tubercle, constituting a peculiar form of *Pathia*
and the casting here I shall speak no more
with the tubercular. And as I conceive them
to be the result of chronic violence, the result
of chronic inflammation, others among whom is
Dr. Dugesswell, consider them as one form of
Tubercle, but not necessarily the primary
or always peculiar to the tubercular variety, so
that we are to take this to be that the
latter kind exist in organs where the former is
never observed. From the fact first stated, of
the *Pathia*, that it consists of casting together

and from their having been observed in the three various stages of transformation there can be no doubt of their tubercular nature. It appears also true that what is usually described as crude tubercle is very often if not invariably a subsequent stage of the melting granulations. The fact of our often finding them highest, successively from above downwards in the large first excavations, then softened tubercles, crude tubercles, and lastly gray, semi-transparent, granulations is very strong evidence of the truth of this. This will bring you more fully prepared to see the details of the tubercular deposition.

Form of Tubercles. Tubercles are usually described as being of a round form, but this condition so often entering into the definition and us, is of course unavoidable; present it is probably an accidental circumstance of lying upon their locality, or the nature of the tissue in which they are deposited. In the deposit of tuberculous matter are first deposited these large irregular accumulations, it is not at first clearly to be discerned whether they may not assume a rounded form from the uniform pressure

which they receive on every side. When deposited in
the acetabular sine, they take the form of the cells of
the bone of the acetabular sine, & when
they are deposited by the joint, the
acetabular sine is filled, then it is said.
In the acetabular joint, when no epithelium
is on the walls, it is a continual cavity,
the cells of the acetabular sine are, but in
which, they take the cylindrical form of their
neighbours.

Pathology of Ossicles

The various morbid epiphyses
which take place in the body, may be divided
into two classes - Cholesterin, the mass
enveloping all the epiphyses, which have a analogy
to the natural fat of the body - the
other class, which is of a more solid nature. Full
of fat, like the adipose tissue, are called
gout, & if it is covering the bone about
the joints, it is covering the body of the bone
of the body, all, & the ligaments.

the lamination as a cause of tubercle.

In this subject there has been much controversy, &c., principally it would seem from a mis-
interpretation of the term "tubercle" & thus, while some use
it as almost synonymous with disease or lesion, others
use it, by it, simply, as more phlegmonous inflammation
in the latter, in which case, it can find no origin
in the production, other than in a visiting cause,
after determining the seat of the trouble, in a
tubercular disease. Disease action is governed by
the laws of disease, in diseases and from, in disease
the circumstances, and will be either in a healthy
constitution or vice versa. Visiting, if it
possess the "v" of that in either a disease re-
sponsible for tubercle, & would not otherwise
be apprehended as tubercular - except still, a disease
or disease investigation set it, & have got
it, & it usually attend with irritation and
suppuration, & so mixing with the tissue, which
we have of't instance, has the effect of a
mistaken, for the cause of disease, & upon this
misconstruction, is placed such a name, from a

want of proper investigation as from the dis-
tress under which it appears. Correct views
of the precise nature of the disease, of the real
nature of the morbid action upon which it de-
velopes itself, can establish the indications
of treatment, and effect
a speedy recovery. We must, however,
be prepared to apply all available
measures to subdue an inflammation arising from
the disease, which will be often a leading
feature in the course, notwithstanding the
habitual character of the disease. It is con-
sidered, that it should be treated with caution, as
the constitutional state is liable, and depeding upon
how necessary, can never remove this disease.

The exact nature of the tubercular disease
is now difficult to determine. Some suppose that
it is but a species of consumption with the
exception of the pulmonary, phrenic &
peritoneal parts, which it is made
up of, together with the small pox
and other affections. Although

chemical tests have never been able to detect the presence of such virus in the circulation. This virus may be transmitted from parent to child, and the part it will make in the history of tuberculosis if it is largely actually taken place cannot be determined by its direct approach, even the above theory. The evidence however for a tubercular poison cannot be demonstrated, and in our present ignorance of the modes of action of poisons I do not conceive that the settlement e.g. the question would add much to our knowledge of the pathology of the disease. It is not necessary to suppose, in the case above mentioned that the tuberculous deposition in the fetus was caused by a contagious principle existing in the mother, or the hypothetical virus has to necessarily be implicated. It might result from the long-continued activity of the malacic organization just as of the mother. There not being of the power to assimilate these & not fully digesting the leads to what I consider the true theory of the formation of tubercle.

The plastic material from

~~the tubercle, & the tubercles are liable to undergo changes in size, & to become more or less sensitive, & to undergo suppuration, & become incapable of transformation into tubercles.~~

~~The tubercles are liable to undergo suppuration, & become incapable of transformation into tubercles.~~

~~It is not known what the cause of the tubercles is, but the author describes the material of tubercles as plate-~~

a imperfectly organisable, making a subsequent change after it leaves the circulating system. It thus finally results from a local defect in the assimilating process, but an abnormal state of the blood is the primary cause of this deranged action by affording impeded materials for the re-organisation. The disease is therefore really constitutional if tubercle existed ready formed in the circulation.

Seat of Tubercle.

Pathologists have usually considered the cellular tissue, the most common seat of tubercle. Dr. Cawsewell however asserts, that in relation to the different tissues systems and organs of the body, the mucous septum is by far the most frequent seat of tuberculous matter, and that its seat of action is the free surface of mucous membranes. In the midst of these conflicting views it is difficult to decide which term is the precise seat of the deposit, and owing to changes which must take place in the structure of the part before observation can be made, the solution of the question, must be very difficult.

The cellular tissue, must be a very common seat of tubercle, as in the brain, and other organs & to whose structure mucous tissue does not enter.

Solidity. — Tubercle has been observed in almost every organ of the body, and where the tubercle is strongly marked, it exists in very many of them simultaneously.

It probably never limits itself to one organ, for very great care like time gone structures because are much more readily affected than others differing in this respect at different periods of life.

In the adult the lungs are known to be almost invariably affected, if the disease has located itself at all.

M. Fouca in three hundred and fifty eight cases found but one exception. Other pathologists have found the exceptions more numerous. This is confirmed in one hundred cases, found no other exception. M. Chass in one hundred and fifty two autopsies found the lungs free from tubercles but six times. It seems to be the more common opinion at the present time that the left lung is more frequently affected than the right. This is the

opinion of Louis Garroell. Gross, and most modern authors. In opposition we have the high authority of Saenger, & of Gantard, Horne, Chass. and Mackinlay. The question therefore cannot be considered as settled. Its appearance in a given number of cases in one lung, more frequently than in the other, may be merely accidental. — The summit of the lung is almost invariably the primary seat of the deposition, and this seems to have reference to the several lobes of which the lung consists. This portion of the superior lobe is often affected, when parts of the lobe most inferior, corresponding in height are perfectly sound. The superior and posterior part of the upper lobe of the lung is usually the first seat of tubercles. Dr Garroell observes that there is no exception to this rule where the deposition has not been preceded by local disease such as circumscript tubercles, pneumonia or pleurisy.

Various theories have been advanced to account for this localization of the disease to particular portions of the lungs. Garroell considers that the

Tubercular matter is separated from the blood and deposited on the free surface of mucous and serous tissues, those that it may deposit in a great measure - a greater or less degree of facility is afforded to its escape. The ingesta being have much greater pulmonary activity, resulting in respiration, thus facilitating the excretion of the matter deposited. Dr. while he admits that the confined and compressed state of the superior lobes of the respiratory organs, would exert an injurious influence, predisposing them both to disease, suggests an explanation derived from the laws of gravity.

The superior lobes in the erect position of the body, are not as accessible to the blood, and from this cause congestions are more liable to arise, determining the development of tubercle. All these explanations of a well known fact, must be mere conjecture, but the view of Cuvier appears more plausible, not that there is much greater facility afforded to the escape of the tubercular matter from the finer capillaries attached to the lower sides of the lungs, but from the increased vigor which the circulation and nutrition of the various portions acquire from the

conditions. The greater frequency of tubercular deposition in the lungs of adult than of children may admit perhaps of explanation, but it has suggested that this deposition is facilitated by passive respiration. When the lungs are kept in repose, correspondingly freely vocal organs are permitted the function of the lungs by expelling mucus and, by the exercise of the vocal organs attending the action of respiration, the lungs will be compelled more frequently to participate in keeping up a circulation and protecting the epithelium of these organs. Next to the lungs in point of frequency of the tubercular deposits, according to Dr. Lee, are the small intestines and it is recorded in the just majority of cases says Corsoil to the lower portion of the ileum, more frequently to the gland of Peyer than of Brummer. The numerous glands are affected in the following order in point of frequency; mesenteric, cervical and trachea. The spleen is also affected in the adult; the same may be said of the brain. Of the various membranes, the pleura and peritoneum frequently

affected by the disease, disease but seldom.

Tubercles are also found on the urinary and reproductive organs, and occasionally in the osseous system. No organ or tissue of the body may be free from the disease, though more commonly in bone and muscle they have seldom been detected.

Progress of Tubercle.

Tubercle may remain dormant in the gland for a considerable period but eventually it becomes active, and the ulceration of the tubercle part it passes into channel by which it escape into the system. The mode by which the infection is spread is usually explained to exist as follows:—It is to be recognized that the tubercle is partially, and wholly affected by the surrounding tissue from its own internal action. When the case has once ceased to be malignant it is still as the mechanical result of fluids excreted from the surrounding parts, — the effect of their irritation and consequent inflammation caused by their action, that however we advocate the malignant nature of the tubercle, before it capable of

undergoing chemical changes. The evidence from anatomical investigations appears contradictory.

Some writers, I believe, always hold that in the tubercle, Convolvular, the tubercle is covered by a thin layer of connective tissue, which may be the cause of the granular nature of the products. In view of this a cavity of absorption, the cause of appearance should be very difficult to find, but it is satisfactory to know, if, and substantially as follows: assuming that the tubercular matter is generally deposited upon the convol. tubercle. Then this, it may be applied to the surface of either a central depression or cavity well to be filled with mucous, serous, or lymphatic fluid, the mucus, again, tubercular, and existing in a purple point, appropriate to a massive deposit and in the manner portions of lung may become surrounded by tubercular matter, and these factors being, joined in a suitable place the appearance of a c. This ingenious mode of accounting for the appearance cannot settle the question.

The inability of the vital organic change in the tubercle to take place is at first to prove.

Conwell, Clark and Atkinson, three of the most
skillful pathologists, have stated that the
suppurative nature of tubercle, "Tumour and
Swelling" always takes place at the
center, and that it is not accompanied by
any part of the abscess. Those who consider tubercu-
lous matter as infected with coagulable lymph
would necessarily believe it susceptible of
organization under certain circumstances.

The view which we have taken of the pathology
of tubercle supports it to be covered with a
degree of vitality. As an objection to this opinion
its nonvitality has been urged, in proof of
which, it is stated, it is notable that the injected
tubercles do not continue, admitting it to be true,
that such is not its natural history. Nonvitality
but other tissues are composed of means of cells
such as cancer plants receive their nourishment,
very recently however, certain trichophytes have
been noted in infecting tubercle, thus establishing
their vitality by direct aff. We prefer then
that the softening of tubercle may arise spontaneously

independent of any extraneous influence. This change may first arise in any parting of the product. The irritability of the deposit affords no reason for supposing its softening invariably appears in the centre. I think there can be no doubt, that this process is generally effected also by the secretion of the tissues surrounding tubercle as the result of the irritation produced. I am aware of the opinion of the Sociey founded on the appearance of the mucous membrane in the vicinity of tubercles.

He ascertained that the mucous membrane of the bronchia frequently did not present any alteration in the neighborhood of crude tubercles until it was almost always thickened and of a red color in the vicinity of cavities. From this circumstance he was led to conclude, that this inflammation being posterior to the softening of the tubercle, cannot be considered as their cause, but rather as the effect of the irritation of the matter found in the bronchia from the cavities. This argument though plausible I do not deem conclusive. The softened matter may produce irritation very probable from the additional fact of the ulcerations of the trachea and larynx being situated at

the posterior part, and on the barygial surface of the epiglottis, that part coming in contact with a greater quantity of the discharge. It is a remarkable fact that tubercle may exist for a long time in the lungs without exciting inflammation, and then, we find the membranes in their vicinity apparently healthy as above stated. This circumstance appears to me to afford additional evidence of the irritability of tubercle, as it is difficult to conceive how an inorganic substance, not engorged can remain to such a degree harmless in the lungs. But eventually, and perhaps in consequence of the tubercular matter not being able to sustain its irritating inflammation area, and liquids are affixed, breaking down the mass. The effect is immediately and might readily be mistaken as having been by acids, for the cause of the inflaming the membrane. The action is probably reciprocal, tubercle first producing inflammation, and its products, by which it is broken down, and the system, matter again increasing the inflammation. We know that ascribed the softening of tubercle to the cause - first to a spontaneous change in the product itself, and secondly from the ulceration of the surrounding tissue, as the effect of its irritation.

In an article on the general pathology of tubercle, I do not propose to treat of all the morbid phenomena to which it may give rise. These must of course vary with the nature of its locality. The functions of the various organs which are its seat must be impeded from the first, and if the disease processes eventually destroy them it follows that the danger depends upon the importance of their function in the animal economy. But as we have seen tubercular deposition is never long confined to one organ, and in the adult the lungs, as we have seen, are almost universally affected.

The variability of tuberculous diseases is now established beyond a doubt. At an early period of life, the disease is often confined to the lymphatic glands, the tuberculous matter of which has a scrophulous character and consists of tan discharges by suppuration, and it occasionally happens even without the process, — by absorption, similar results take place in the lungs in that form of the disease constituting phthisis. This evolution of the product by softening and expectoration, would, of course, the disease did not depend upon a morbid diathesis, which remaining, fresh depositions are constantly taking place. There can be no doubt that a spontaneous cure is occasionally effected in this manner. All the physical signs of tubercle have been present and indicating

the instance of a cavity, and subsequently when the part it has been destroyed by some other disease, a cavity has been found in that portion. The cavity, in which the excretion had, formerly, resided. There is still another form of tubercle which is a cavity infested. All the animal portions may be absorbed, leaving a calcified mass, which becomes enclosed by an accretion of bone, formed by a union of cancellous lymph, and may thus remain to moulder in the system through life. These chalky concretions are sometimes collected of an appearance resembling dry mortar.

A description of the symptoms, and treatment of tuberculosis, in its various stages, and complications, will not in different organs, does not properly belong to a general dissertation on the subject.

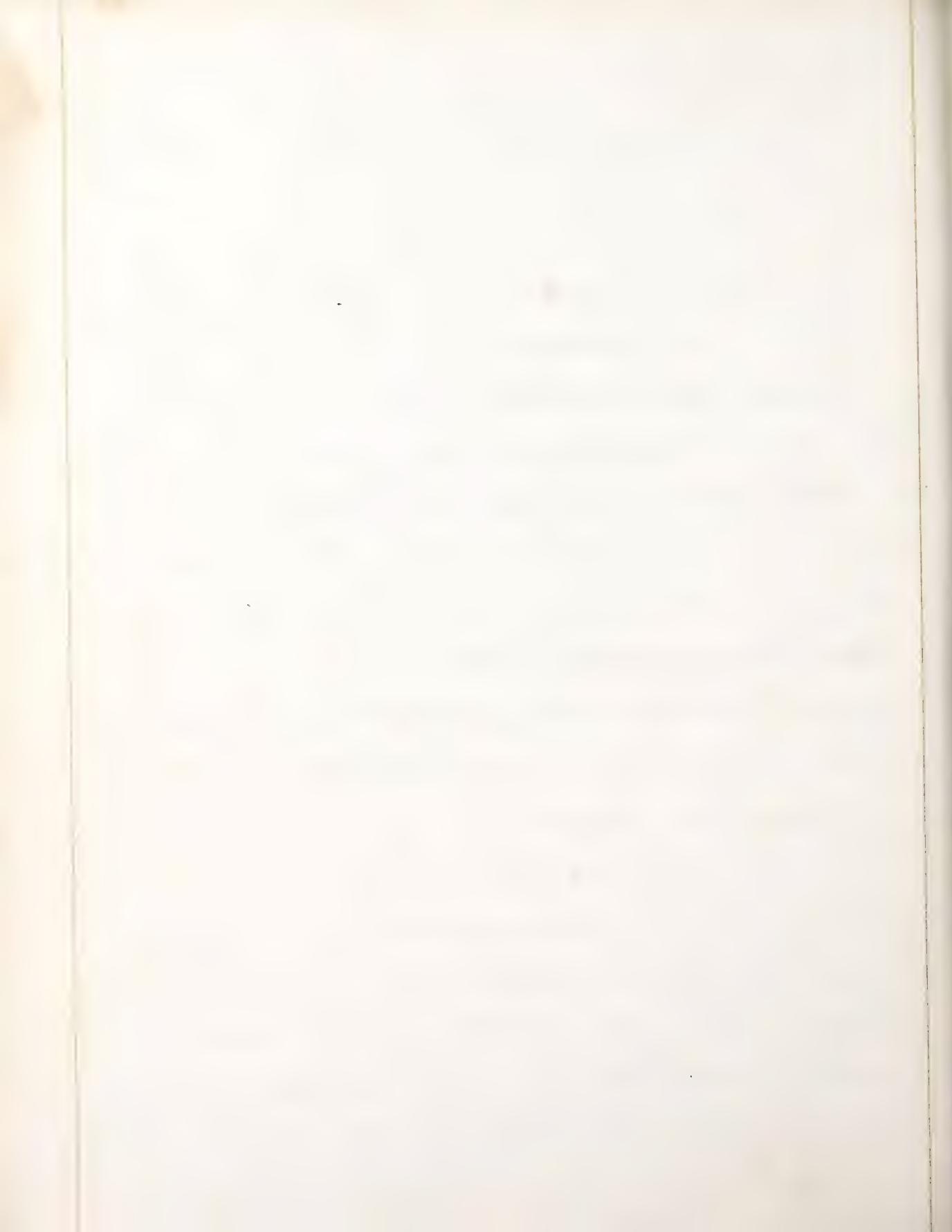
Of the various predisposing, and exciting causes of tuberculosis, I need not allow me to speak important as they must be considered. At least, they may be stated to be all those agencies which tend to depress the power of the system, and which act especially to derange the process of nutrition, - the development of tubercle resulting, as we have endeavoured to prove, from a deficiency of vitality, in the nutritive, or assimilating function. H. S. Wampsey.

IX.

Dissertation
on
The Inhalation of Ether.

By

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of Leverett, Mass.
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On the Inhalation of the Vapor of Ether

Towards the close

of the year 1846, Drs. Jackson and Norton of Boston recommended the inhalation of the Vapor of Ether, for the purpose of preventing the pain attendant upon surgical operations; also as a remedy for some forms of disease, which, though highly distressing, are unaccompanied with acute pain; and the success which has followed its use, both in their hands, and in the hands of others, has given it a great degree of celebrity and popularity. Truly marvelous have been its effects. Not only does it render patients unconscious of suffering, while undergoing the most formidable and painful

operations, but it even annihilates sensation; during the progress of labor, the uterus still going on with its paroxysmal efforts, and accomplishing its task with unprecedented rapidity and safety.

It also as a therapeutic agent, allays the violent and agonizing pains of neuralgic diseases, and in some of the most distressing and alarming spasmodic affections, has not only put a stop to the violent and unnatural action of the muscles, but has frequently exhibited what without it would probably have proved fatal.

Still, however, it is not utterly harmless, for death has occurred which has been attributed to its influence. And here the inquiry arises;

Whether a practitioner is justifiable in using a remedy, merely because it has the power of rendering his patient unconscious of suffering, without possessing any other beneficial quality?

In answering this inquiry, it will be necessary to examine some of the facts, deduced from the experience and observation of those distinguished gentlemen, who have used it; seen its effects, and communicated their knowledge to the world.

And in the first place let us consider the apparatus, and the mode of exhibition.

The common apparatus used in this country, is a glass vessel, with two tubular openings, one of which has a mouth piece, in the throat of which is a valve. The valve closes during inspiration; but opens upon expiration, in order to give vent to the air of the lungs. The other opening, is for the introduction of a sponge, afterwards saturated with Ether, which is admitted into the globular part of the apparatus. This apparatus has been objected to, and ^{perhaps} with reason, because, it is not provided with any means for regulating the proportions of vapor of ether, and of air; and it has a worse fault; that of being cooled by the evaporation of the ether taking place within.

The air is cooled in passing through, and takes up less and less vapor as the process goes on, and sometimes when the patient is on the point of becoming insensible, no further effect is produced; or when seemingly insensible is aroused by the ^{life} of the surgeon.

ether possesses in an eminent degree the property of becoming converted into vapor. When in contact with air, its vapor mixes with, and expands it; and the quantity of vapor, that will thus mix with the air, increases with the temperature, in the same ratio, that the elastic force of the vapor of ether, bears to the temperature.

By taking advantage of this law, of the quantity of ether vapor that will mix with air at different temperatures, viz. at thirty degrees Fahrenheit, one cubic inches of air take up 2 cubic inches of vapor, and become 12 cubic inches; at about 17°, they take up 100; and are expanded to 200 cubic inches; above this temperature, the quantity of vapor increases with enormous rapidity, till at 100°, it excludes the air entirely— we are enabled to regulate the proportion of air, and of vapor, that a person breathes. In order to do this, it is only necessary to bring the air & ether sufficiently in contact, and to regulate the temperature. But, what is the effect produced upon the volume of ether-vapor when it reaches the air-passages?

In the lungs, it comes in contact with a surface heated to 98° or 100° of Fahrenheit. Will not the ether vapor then expand, so as to fill the cavity of the chest, and thus exclude the air entirely? We are of opinion that, cool the apparatus as you may, this cooling has no control over the ether vapor after it reaches the trachea. Some think that sponge alone, is ^{the best} apparatus, & thus describe the mode of using it: Get a piece of sponge, quite clean and free from oil, large enough to cover the mouth and nostrils; immerse it in water about 50° below heating heat; squeeze it as dry as you can, pour the quantity of ether; (from half an ounce to an ounce at a time will be sufficient), into a tumbler, or glass basin; dip your sponge in, and it is then ready for use. Perhaps, the following solution will prove to be more effectual than simply the ether; prepared by adding 2 drams of Claum Etherium, to 2 ounces of pure rectified Sulphuric Ether. Should the vapor be too powerful for the patient, hold the sponge at a little

distance from the mouth, gradually advancing it as the patient can bear it. Probably the sponge is the best apparatus in use. There is however one other mode of administering the Ether vapor, which must ^{in some cases} be preferable to the sponge.

It has the advantage of being economical without a very small quantity of Ether, probably not a drachm, has been required to produce its full effects upon the system. It consists simply in applying a vial of Ether to one nostril, while the other nostril & the mouth are closed, and making several deep inspirations.

However trifling the amount of injury has been, in proportion to the frequency with which ether inhalation has been practised, there cannot be a question, that an agent capable of inducing such remarkable and potent effects, ought not to be regarded as a "scientific toy", or even to be employed at all by persons unacquainted with the principles of Physiology and Pathology. And the following precautions are considered requisite in its administration, viz.

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- 1st Never to exhibit the ether vapor without having previously auscultated the heart and lungs.
 - 2nd Never to employ it in persons who have signs of obstructive disease of the heart to any extent.
 - 3rd Never to employ it in persons who have any considerable portion of a lung unfitted for respiration.
 - 4th In persons with short necks, with tendency to cerebral congestion, its employment is not without danger; also, perhaps, in those with disposition to insanity, or other recurrent diseases of cerebral origin.
 - 5th No operation of consequence should be performed under the influence of ether without a preliminary trial exhibition; while the ether employed should be the purest washed Sulphuric Ether.

The Time which is required to produce insensibility, varies according to the degree of skill with which the vapor is exhibited. It is produced in some cases in two minutes, and in others only imperfectly induced at the expiration of twenty minutes. Insensibility is more rapidly produced in children and women than in men.

The Period during which insensibility remains, is also subject to variation.—

8 The average duration may be stated to be from two to ~~six~~⁶ minutes. Sometimes, and especially in those ill-managed cases, in which the patient is more suffocated than etherized, he does not perfectly recover his consciousness, for half an hour or more. The restoration is sometimes gradual, at others sudden; the patient starting as from a dream. He is for a moment or two somewhat incoherent, and staggers about as if half drunk. So ill effects are left behind in the majority of cases, but in some, more or less headache remains for the rest of the day.

Patients while under the influence of vapor of ether, can both see and hear.

They will act from their sight, and reply to the questions proposed to them without being aware of what they are doing.

It may be well, therefore, to have the eyes bandaged previous to an operation, and also, to have silence observed during the time the effect is required to be kept up.

We come next to a consideration of ⁹ surgical operations, performed while the subjects of them were under the influence of the vapor of Ether. Our limits will not allow us to give a minute description of any of the great number of operations that have been performed, ^{therefore} and a brief Synopsis must suffice.

And 1st. Amputation of both thighs of a young man aged 23. He was put under the influence of ether vapor in one minute and a half, and the limbs were both amputated in eighty-five seconds.

The left thigh was first removed, and while the blood vessels were being secured, the right was amputated. The influence of the ether was most marked; his pulse rose under it, and he appeared to be in a tranquil sleep. The blood in the small arteries, was much darker than usual, so that it was very difficult to distinguish it from venous blood; and the muscles did not retract as they do wont in amputation from recent accident. When he had recovered from the effects of the ether, he said that he knew something was being done to him;

- 11) but he had never felt no pain.
- 2nd), Excision of the scapula and one half of the clavicle; successful.
- 3rd), Removal of the breast of a female, aged 50 years, containing a carcinomatous tumor.
- 4th), Reduction of dislocation of the shoulder beneath the Pectoral muscle, three weeks after the occurrence of the accident.
- 5th), Excision of immense crops of warts covering the glands and prepuce.
- 6th), Two cases of removal of toenail by cutting and evulsion.
- 7th), Three amputations of the thigh for diseased knee joint.
- 8th), Extraction of teeth without pain, in a great number of instances...

In all these cases no unpropitious result followed. We might mention many more cases like the preceding, as every medical journal contains accounts of operations performed under the influence of ether-vapors, but we deem it unnecessary to do so. By the aid of repeatable etherization a case of well-marked Tramatic

Gentian, is depurated as successfully treated.

In an analogous case, ^{however,} the ether was ineffi-
cient.—In the treatment of apnoea-mania
 asthma, the vapor of ether has been used
 with success. Also in Parturition, the paroxysms
 of coughing, are positively cut short by
 employing the vapor of ether, when the fit
 is perceived to be coming on. The vapor
 of ether has lately been administered to an
 insane patient, who had no rest night or day
 for a period of nearly five months. The patient
 became immediately calm, and after five inspirations,
 she fell into a state of insensibility, which
 lasted twenty-five minutes.

Let us now turn
 over the leaf and see what is said on the other
 side of the question, with regard to the
suitability of the use of the Vapor of Ether.

If we endeavor to inquire into
 the physiological effects, resulting from the
 inhalation of the vapor of ether, one fact
 is obvious, that it prevents the carboniza-
 tion of the blood; by depriving the lungs,

12. either totally or partially of oxygen. For it is
seen, black or venous blood must circulate through
the arteries as well as the veins; and by the im-
pression it makes upon the brain, occasion
asphyxia, in the same manner that this effect
is produced by immersion in water, or the me-
phitic gases, or by strangulation. Of this
there can be no doubt. It having been proved
by experiments upon animals, and by examination
after death of some of those persons who have died
after inhaling the ether vapor. Yet notwithstanding
this palpable fact, we read of patients
being carried from the operating theatre, in a
state of utter unconsciousness, and apparently with
the utmost non-chalance on the part of the
operator; who takes it for granted, that as
soon as the effects of the ether vapor vanish,
the patient will awake from his state of insensibility.

But sometimes, this state persists so long,
that alarm is excited, and then measures are
resorted to in order to overcome it.
And what are these measures? —

What means have been adopted to rouse the patient from his collapsed condition & why? even Echo answers, what? Surely, if we voluntarily administer a poison, we ought to know its antidote.

Yet none has been discovered on which we can rely; and those who have been resuscitated from the comatose state induced by the inhalation of ether, seem to have owed their recovery more to the viv-medicalix nature than to any sanitizing influence of the means administered. Even Oxygen Gas, which one would suppose best calculated to neutralize, or subdue the pernicious effects of the ether, is of no avail whatever.

It rather has a tendency to increase the morbid effect than to relieve it. But, Death, has occurred from the inhalation of the vapor of Ether. The death of Mrs. Parkinson, is attributed to this agent.

In the case of Whately, related by Mr. Henn, the ether was evidently fatal; also in the two cases of M. Jobert in France. It is probable that if the deaths were faithfully recorded, we should find that in many more instances they were not from ordinary causes.

The following, are some of the objections at present brought against the inhalation of Ether vapor.

In the first place; it is impossible before hand to fix the dose of the vapor; that will be required to produce given effects, upon any patient.

Then it is not always easy to ascertain when enough has been administered. Again; we cannot predicate the form which the intoxication may assume - whether that of coma, or excitement; the latter would be an evil, in the performance of any operation; and in some, Purina and Lithotomy for instance, - a sudden movement of the patient might endanger his life.

Unconsciousness of suffering is not always desirable, for we sometimes wish to know if nervous cords, are unnecessarily touched; And, besides all this, very serious consequences have already resulted from its use, affections of the nervous system, approaching apoplexy, Syncope, dyspnea; and Spitting of blood.

A celebrated and scientific gentleman* in answer to certain queries on the injurious effects,

* Mr. Benjamin Rivers Jr.

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of the administration of Ether, remained, that
the proximate as well as the immediate effects
should not be overlooked; as he believed the
effects of ether were progressive; and that a
man having been under its influence, might
die in the course of five days, as well as of
twenty-four hours. He had known a man, five
days after death, still living of the ether; the
stump having become gangrenous. He believed
it to be a poisonous and dangerous remedy,
attended with the greatest risk, and requiring
the most profound caution in its use....

In parts operated upon under the influence
of Ether, there is no muscular contraction, no
retraction of the larger vessels, and the smaller
ones continue to pour out their contents.

With the exception of the flow of blood, it
is like cutting through dead flesh, and the
parts fall, as it were, asunder.

The conclusion, which we naturally would
infer from the above facts, is, that the mere presen-
tation of pain is not a justifiable plea for placing a man's
life in jeopardy. —

16 Pain may be considered a premonitory condition, no doubt fitting parts, the subject of lesions, to reparatory action; and therefore we ~~ought~~ should feel averse to prevent it. Pain is preventive, preservative, and curative.

The sensation of pain, rouses us suddenly from our sleep, and impels us to flee from impending danger; the dread of pain preserves us from that, which would prove prejudicial to moral, as well as physical, health; it rebands us from rushing maddly into the vortex of vice; merely for the sake of the transient pleasure it affords; and actual pain, under disease, induces us to resort to those means best calculated to remove its cause. Pain, may, in fact be considered as a sentinel, wisely stationed on the walls of the citadel of life, to guard it against danger, or to give warning of its approach.

A humane physician, or surgeon, then, should weigh well the consequences of driving this sentinel from his post, or of lulling him to sleep while there.—

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numerous cases are reported, in which nothing
was offering removed or alleviated, during
parturition; but even the process itself,
conducted to a safe and speedy issue under
the administration of the laudanum of Ewer.

Still, however, we cannot but deplore the introduction of this adjuvant into
obstetric practice. It quickens and eases
labor; is not, consequently, a safe aid,
for we must look at its ~~contra~~ ^{positive} qualities;
and there is no pain which sufficing
humanity is called upon to endure;
attended with so little danger, and so
quickly forgotten, a that which attends
upon parturient effort.

In ninety-nine
cases out of a hundred, there is no danger
in this process without the use of it.
(we would naturally say the same
with its use) and — notwithstanding the
extreme opiuming which is consequent, and,
naturally, ought to be consequent on the

act of parturition — in an equal proportion of cases, the woman forgets her sufferings. The moment her child is born; unless it be those after-pains which the medicatrix naturæ brings into play, to remove the congestion, and diminish the volume of the puerperal womb.

Were it possible to restrict the administration of the vapor of Ether, to the most skillful and judicious physicians, as has recently been done by the Grand Duke of Hesse-Darmstadt — who has prohibited the lower grade of medical practitioners, (officers de santé) dentists, and midwives, in his dominion, from using it in their operations,— our apprehensions would be less serious. But, in our beloved land of liberty, where big bungs and little bungs, and humbugs, equally operate with impunity, such exclusiveness is repudiated; and, therefore, they who have a name to gain, as well as those who have no name to lose, will in all probability, be most eager

to use it, even are hazardous, as well as unnecessary occasions. Hence, many respectable physicians, though dubious as to its propriety, may be driven to administer it in self defence. For we are well aware, how strong is the desire of freedom from suffering, where pain is dreadest, and how natural it is to the afflicted to have recourse to those, who promise them such immunity, and to give them the preference over the more prudent and skillful physician; and we also will know what a high reputation, for the time being, clings to that accoucheur, and what a halo of glory encircles him, who is notorious for expediting labor, and rendering it easy, be the consequences what they may. But such renown is not generally durable. Death, by flooding consequent upon the collapse of an enervated womb, or from epilepsy, congestive of the brain; or even from puer,

20 originating from the combustibility of the material used; or from some other cause, equally formidable, and equally attributable to the vapor of ether, will inevitably blast such ill-gotten laurels.

There may be cases, in which this article will prove serviceable, but it should not be administered merely to allay the fears and remove the sufferings of a panic-stricken or common parturient.

It has been stated^{*} that all the narcotic effect of ether may be readily produced by causing the vapor to pass into the Reservoir, as by inhalation.

The method of proceeding is first to evacuate the contents of the Reservoir, as one may, then to introduce an elastic pipe, which is connected with some receptacle, which is half-filled with ether. This reservoir, is then

* By Dr. Pirogoff

21.

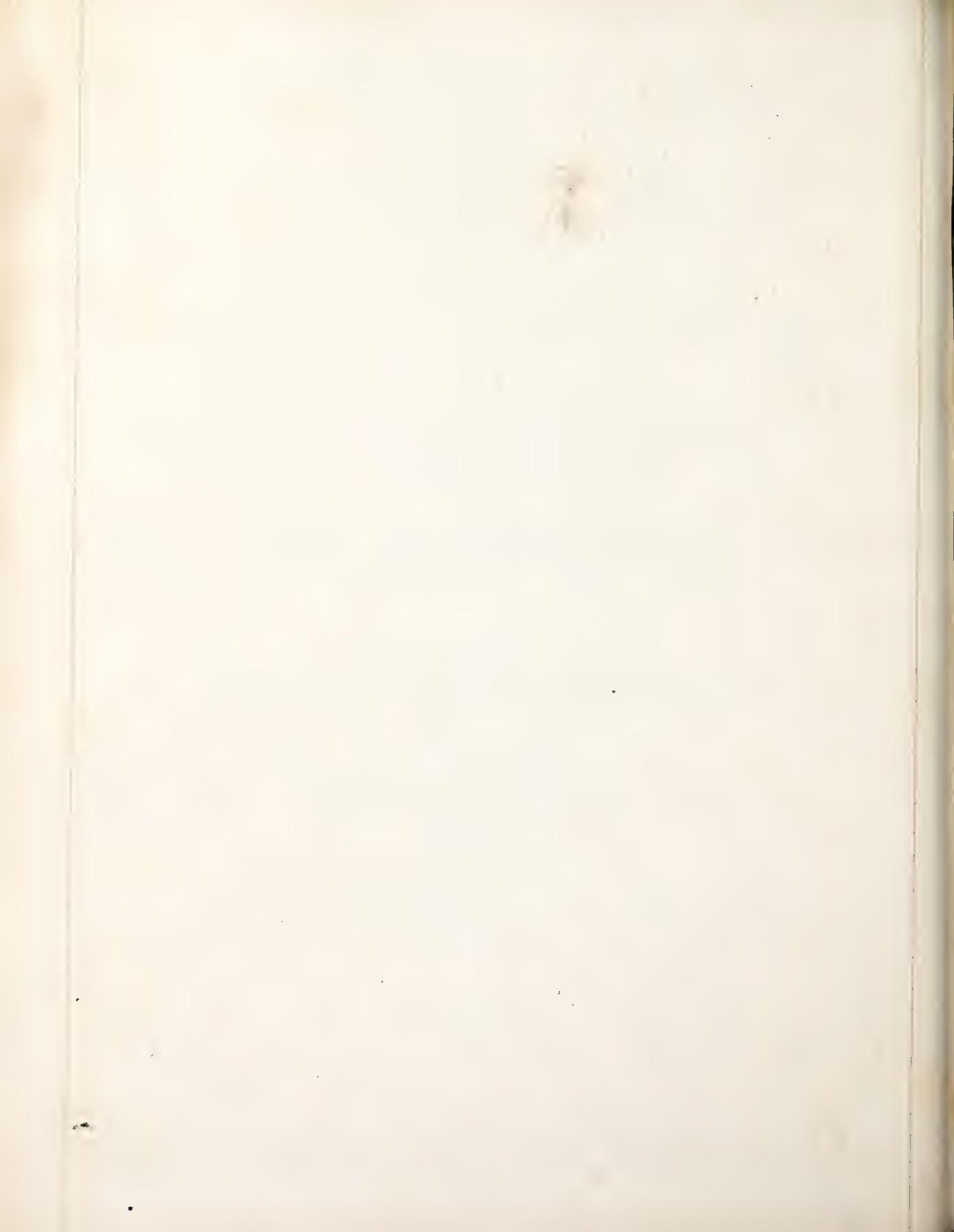
covered with a towel, wet with warm water, and evaporation speedily commences, and the vapor, mixed with air, passes into the hands. The breath is impregnated with the odor of ether in ten minutes, and all the symptoms of narcotism are induced in five minutes.⁺

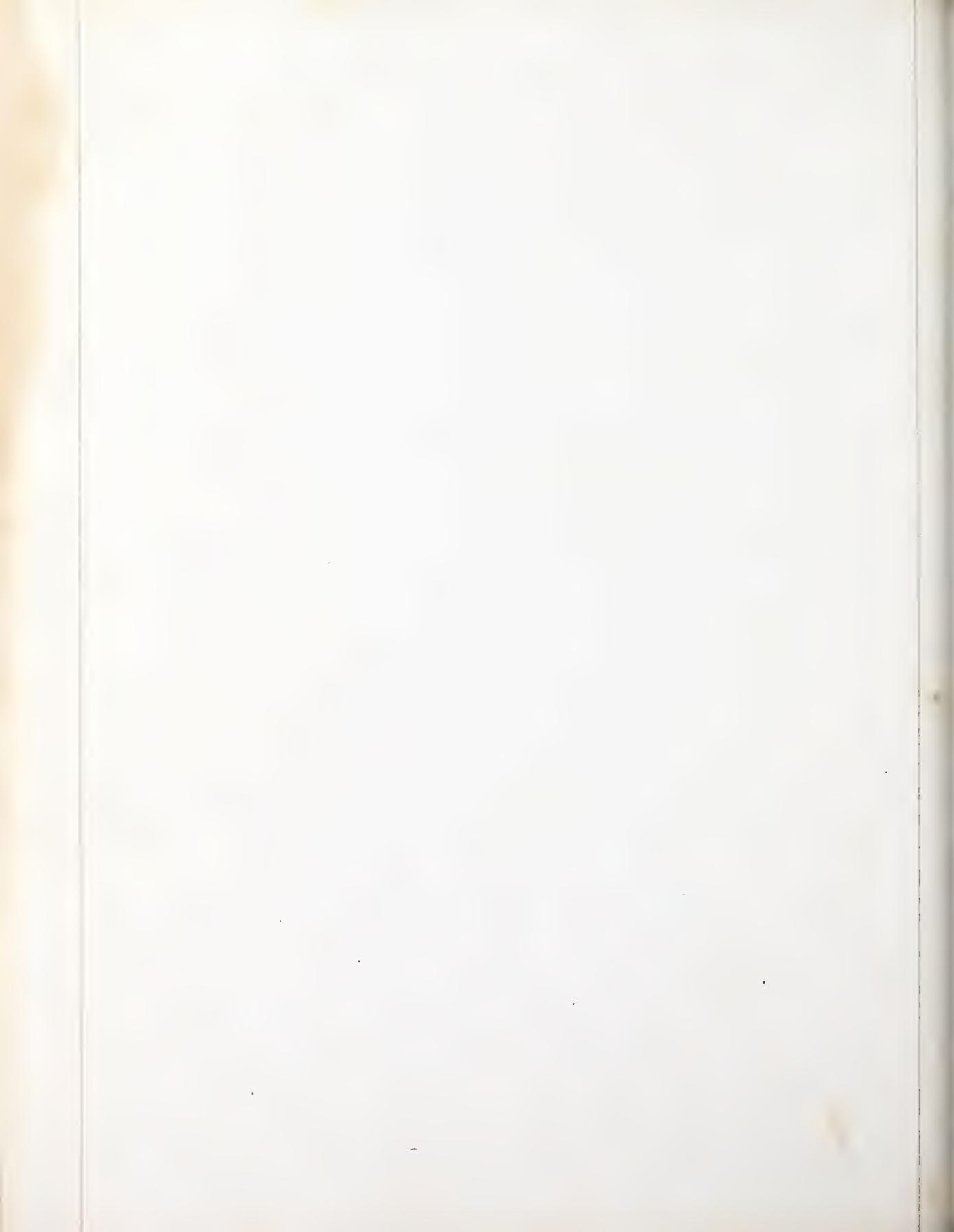
This modification is undoubtedly worthy of trial, as by it all the objections heretofore brought against the other inhalation, on the score of strphygia, are completely done away with.

We have now concluded what we had intended to say upon the inhalation of the vapor of ether. We are fully aware, that much more might be said of it, and ought to be said, in order to do justice to it, but we think we have said enough to enable an opinion to be formed, with regard to the practicability of its use, and to what cases its use should be restricted. All of which is respectfully submitted, by

Andrew Eaton Marcy, of Lowell, Mass.

* To Dr. J. H. Miller, Professor of Phys.



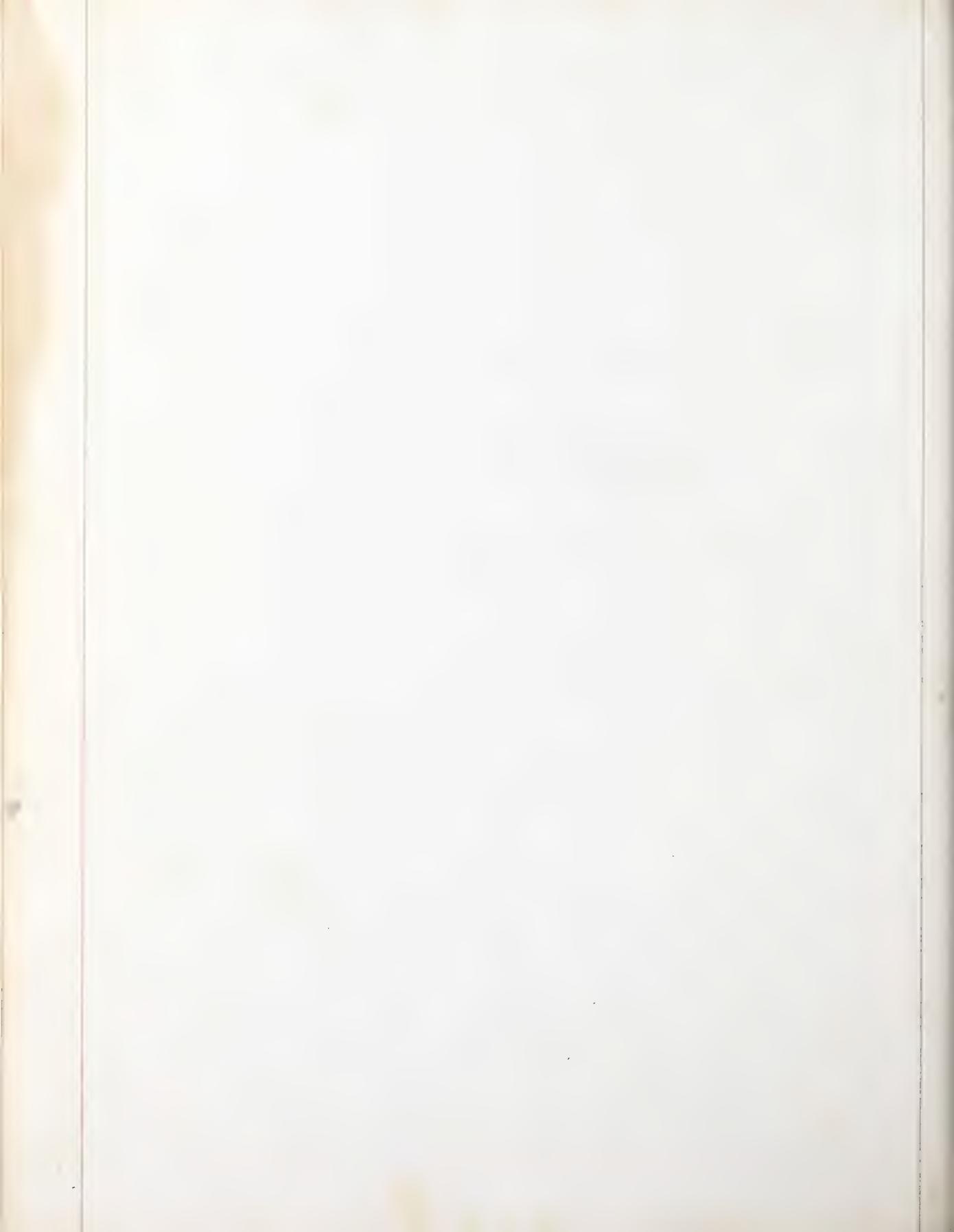


X.

Dissertation
on
Phthisis.

By
Elisha Smith Peck,
of Syme,

Candidate for the Degree of Doctor in Medicine.



Tubercular Phthisis

The above named disease, of which it is my purpose to give a short description, annually carries off a large number of the human family. And from the very nature of the disease, they are previously subjected to great, and often protracted suffering. Hence a careful, and patient investigation is most clearly demanded, of those who are called upon to treat the disease. And in truth it may be said, the demand has been fully regarded; As from the days of Hippocrates down to the present, untiring research has been made by those on whom the arduous and philanthropic ^{duty} has devolved, into the pathology and treatment of the disease. Thus a vast amount of knowledge has been accumulated upon this subject. Of this, it is our purpose to give a short sketch. We would remark previously that it is not

our purpose to extend it beyond that portion which relates to tubercular phthisis as confined to the lungs.

Without dispute, it will be admitted that the disease is hereditary; that is, that those who suffer from it have received a taint from their parents, probably in every case. That such is the case has most clearly been shown, over and over again, by long and careful observation. When the disease has been once originated, it is almost always transmitted from one generation to another; or to speak perhaps more clearly, or rather correctly, a predisposition to the disease is transmitted.

As already intimated, it is a very fatal disease; since few if any who are attacked, the disease becoming fully developed, ever escape, though all the power of the healing art be assiduously applied for their rescue. Many experiments have been tried, and new modes of treatment devised, both by the learned, and ingenious, but all to no purpose. The foe steady to his post, has continued his work of death till finally fully accomplished, notwithstanding the Materia Medica

may have been able arrayed against him. Says Eberle, "tubercular consumption may be regarded as incurable." Again, "it is now however the general opinion of those who are acquainted with the actual state of our knowledge respecting the pathology of this disease, that the tubercular affection, like cancer, is absolutely incurable; inasmuch as nature's efforts towards effecting a cure are injurious, and those of art useless." Yet he admits that it is in some cases cured by nature's efforts, as for instance when the tubercles are deposited in only one portion of the lungs, which becoming softened, and expectorated, there being no more deposited, a kind of cicatrix is formed of a semi-cartilaginous structure, and the patient recovers. Now that such favorable termination may be, and often is, promoted by appropriate medicine most probably we ought not to doubt; and yet to prove such to be the fact may be difficult.

The formation or deposition of tubercles in the lungs, is closely connected with a scrofulous diatheria. The tubercles themselves consist of unorganized matter of a yellowish color. It is deposited from the blood and most commonly upon the free surfaces of mucous

membranes. The form of the matter is that of the tissue in which it is deposited, being either round or tubular according to the shape of the tissue. When such deposition takes place on the lungs, it is perhaps always either in the pulmonary vesicles or in the small ramifications of the bronchi. It was formerly taught, that the tubercular matter after having been deposited, and lying a longer or shorter time in a quiet state, gradually softened, commencing at the center of the tubercles. We are now taught however, that such is not the fact, but that they have such appearance when cut across arising from the manner in which they are excreted, it being from the inner walls of the vesicles or bronchi; hence the matter is not as dense in the middle of the tubercle, as on the outside; so in most cases they would not in all probability be entirely filled. And still further is the softening of the tubercles accounted for, by supposing the tissue by which they are surrounded, and in which they are situated to become pressed upon, and from this, or some other exciting cause, to take on inflammation, finally suppurate, and the pus or purulent matter is

infiltrated into, and around the tubercles, which are thus loosened, softened, and finally expectorated.

It may be proper to remark in this connection, that careful observation has shown, that tubercles are not deposited in the commencement of the disease, at random, over the lungs; but in their upper and posterior portions, most commonly; a knowledge of which may be considered of the highest importance in practice, and particularly so, since other inflammations most frequently commence in the lower portions.

Most usually this disease commences with aching pains, more or less severe, in some portion of the chest, with also a sense of tightness, accompanied with a dry cough which is much increased by violent exertion of any kind. The respiration is also commonly disturbed, being more short and quick than usual. These symptoms continuing to increase, febrile irritation makes its appearance, coming on more usually toward evening, accompanied by a somewhat quickened pulse. A paroxysm of coughing almost always occurs in the morning, at which time the patient rises from bed feeling very feeble and languid. He will

be very sensitive to a change of temperature, and liable to take cold from the slightest exposure, which will most surely fasten upon the lungs; often being sensible than when in no other portion of the system. The bowels will be disturbed in their functions, becoming constipated usually. And the tongue though commonly clean, sometimes will be covered with a thin, and white fur.

As progress is made by the disease the paroxysms are more frequent, and severe, disturbing the patient at night, and thus preventing his usual amount of quiet rest. The white of the eye will appear to increase in whiteness. The skin and lips will be dry, particularly in the afternoon. In some cases slight chills will make their appearance, once in three or four days, and in some instances, every day, followed by some fever together with a well defined red spot seen upon one or both cheeks. An unpleasant heat is also very commonly felt in the palms of the hands, or soles of the feet. The breathing which is already short grows still shorter, and the pulse also more quick, and tame, as progress is made by this fell

destroyer.

Night sweats, another accompanying phenomenon, come on at length, producing their usual languor, and prostration. By this time, or even before, the expectorations which at first were quite thin, begin gradually to increase in consistency, becoming purulent streaked with blood, and finally true pus.

All the above named symptoms continual to increase in violence; emaciation ever keeping pace; hectic fever is at length fully developed. Swelling of the feet, and legs, with a diarrhea, and aphthae of the mouth, and fauces, following in quick succession, show to friends in language not to be mistaken, that dissolution is near at hand, and to patients, that their earthly sufferings are soon to have a final close.

Having thus run over a few, of the more general symptoms, we will now proceed to give some of those which are afforded by percussion, and auscultation. If we percuss a portion of the lungs the sound heard will be the same whether it be hepaticized or completely filled with crude

tubercles; the sound being dull in both cases. And so likewise, if we auscultate such portion of lung, we shall hear no vesicular breathing in either case; but simply bronchial. Now it may be easily seen, that under such circumstances, disconnected with other considerations, percussion, and auscultation, would afford us no certain symptoms of phthisis. And yet by taking into account the history of the case, under examination, with other symptoms which may be present, we are thereby enabled with much greater certainty, and correctness, to make out a diagnosis.

A vomica in the lungs is shown by a gurgling sound which is heard on auscultation, caused by the passing of air through pus, or purulent matter collected in an open cavity in which there are open bronchi, leading directly into the trachea. When this peculiar sound is heard, we conclude we have a very clear symptom of phthisis, which most commonly is true, yet there are exceptions, as there are other states of the lungs in which such a sound may be given out;

as for instance, when an abscess is formed as the result of common inflammation, or in a dilatation of the bronchi. It may be well to remark also, that one requires long, and careful practice to be sure he hears the proper gurgling sound.

If the vomica be empty, there is heard what is called cavernous respiration. This sound, or rather the sound coming from such a cavity, is not always the same; but varies according to the shape and size of the cavity, being when large a mere exaggeration of bronchial breathing, and when small a click only is heard, like the opening and shutting of a valve. Owing to size, and kind, a tubular cavity may give on percussion, the metallic sound commonly heard in Pneumothorax; But we distinguish the one from the other by the position in which the sound is always heard, and the absence of excessive resonance in case it is situated in any part of the lungs; bearing in mind at the same time, that in Pneumothorax a very clear sound is heard, we shall have little difficulty in distinguishing between the two diseases.

The hearing of the patient's voice, when an application of the stethoscope is made, as if coming from the chest, is a symptom of some value, and when attention was first called to it, was thought almost infallible; but was soon found not to answer such high expectations: for those who relied upon it as affording conclusive evidence of phthisis, often found themselves deceived, and sadly disappointed, since there are other states of the lungs, than that of a cavity, which will give a like sound, and also from the same locality, as when there is a solidification of the upper portion of one or both lungs, from any cause whatever, and the large bronchial tubes which traverses it, being at the same time puerous. Since then a portion of lung may be rendered dense, not only by crude tubercles, but by common inflammation, we are lead necessarily to conclude, that pictorialogy is not much to be relied on when taken by itself, as proving the existence of consumption. And yet, when considered in connection with other symptoms, is of considerable value to the observing physician.

We have already simply enumerated most of the general symptoms of this disease; but will however mention a few of them again, and perhaps give others, that they may be dwelt upon more fully.

The expectoration of blood, is the first which we would call up. Under certain circumstances this is one on which dependance may be made, with some degree of certainty. Say Watson, when remarking upon this symptom, "if a person spits blood, who has received no injury of the chest, in whom the uterine functions are healthy, and right, and who has no disease of the heart, the odds that there are tubercles in the lungs of that person are fearfully high." It often precedes the manifestation of any other symptoms, and in some cases, even for years.

We are by no means to conclude however, that in every case of consumption, blood will be expectorated, for it not unfrequently happens that there is not the least appearance of it, through the whole course of the disease. Of course we are not to consider the expectoration of simply mucus and blood, such as may occur in bronchitis or pneumonia, as what is

ment by the term, expectoration of blood. By careful observation, and long experience, it has been found that in a large proportion of cases, probably in nine out of ten, where this symptom makes its appearance, there is a fatal disease already commenced, and most usually it is phthisis.

Difficult breathing is commonly a symptom, but not one on which dependence is to be placed. For though in some cases the breathing will be somewhat quickened and shortened, and especially towards the termination of the disease, and yet not always appreciably so, since there is less blood in the system than in health, and therefore less oxygen is needed for its decarbonization.

Pain in the chest, or side, is another symptom; but as it does not differ materially, or rather has no peculiar characteristic mark by which it may be distinguished from pains arising from other causes, it is not of much value in diagnostics.

Hectic fever is generally an attendant; coming on usually in an advanced stage of the disease; yet making its appearance sometimes much earlier.

A chill is felt, more frequently towards night; through most of which, the feet and hands are felt hot and dry. Towards morning however a sweat commonly breaks out, which usually is partial, extending over a portion of the body only.

In most cases there is also a diarrhea, sometimes commencing early, but most commonly near a fatal termination of the disease. This is an unendurable symptom, both to the patient, and physician, and also very hard to manage, frequently wasting the patient most rapidly notwithstanding all that can be done.

Although there are other symptoms which may attend this disease, and many of them striking, yet feeling that a sufficient number has already been given, we will forbear to give more.

We have said that the remote cause of this form of phthisis, was an inherited predisposition. All who are thus predisposed however, of course do not have the consumption. This may be accounted for in a measure, perhaps, by supposing the predisposition to be stronger in some cases than in others.

but more fully, doubtless from the various predisposing and exciting causes to which individuals may expose themselves in after life.

We will therefore proceed to mention a few of such causes. And in doing so, we would say first, that anything which will weaken the powers of life, or debilitate the system, will without doubt, where a tubercular diathesis exists, predispose to consumption; since any ordinary or common cause of irritation in the lungs would be more likely to prove effectual, under such a state of things, in exciting consumption.

An inactive, and especially a studious life, most evidently may be numbered among such causes, since such a course of life greatly tends to weaken the whole system, and particularly the lungs; from the bent posture which usually is taken by such persons while engaged in their employment, though not wholly arising from this; thus predisposing them in case of an exposure to an ordinary exciting cause, to tubercular phthisis; as is shown most fearfully at this day, when scarcely a week passes

but some loved and highly useful individual falls by this disease, and even within the circle of our own acquaintance.

Another, and as we believe, very frequent predisposing cause, is the living, sleeping, and laboring in very warm, unventilated, and often small rooms. Most people at this day use stoves, instead of fireplaces, and thus are enabled with great facility to heat their rooms, and to keep them heated to a very high temperature, which is actually done, by a very large proportion of the community. This arises, doubtless, not only from what we have now stated, but from the fact also, that in these days houses are built very tight. The utmost power of the most skilled workman, together with all the improvements of the age, are brought to bear, when a house is being built or rooms finished, upon this one point; the keeping out, during the cold season especially, every breath of air; forgetting that our very lives, as well as healths, depend upon good fresh air. Now in the days of our ancestors, say fifty or sixty years ago, houses were more roughly

built than in this age of invention. Albany being constructed at that time of logs mainly, which would of course admit air, fresh and good, most freely. Hence death by consumption occurred but seldom in those days, when compared with the present. And furthermore, those who did die of this disease in that age, usually lived some fifteen or twenty years after they were attacked, but now they die more commonly in from six to twelve months: thus showing most clearly, as we contend, the effects of the above stated predisposing cause. Though doubtless there are other considerations which might be mentioned as concerned in bringing about such a change.

We shall not say much upon the exciting causes. Suffice to say, they are many, since anything which will bring on or cause an inflammation or irritation of the lungs may become an exciting cause.

As to the treatment of phthisis it may be said, that although so invariably unmanageable and fatal when once fully formed, yet something

may and should be done with a view to postpone its development, and to retard its progress also when developed. To meet the first named indication, every thing having a tendency to produce an irritation of the system, and particularly of the lungs, should be most carefully avoided. Persons being predisposed, should be particularly careful not to expose themselves in very severe and damp weather, and to always clothe themselves sufficiently warm, thus keeping up a healthy and moist state of the skin, which is accomplished most effectually, especially in our variable climate by wearing flannel next to the skin, both summer and winter. They should also pay particular attention to their diet, that it be not too stimulating. A vegetable and farinaceous diet is considered the best. To live upon milk is recommended by some, which unquestionably would be very well in some cases. Moderate and daily exercise in the open air should not be omitted; and riding on horse-back would be a very good mode of accomplishing such an object. There is a great tendency to a morbid irritation of the

system, and it is thought, nothing is so good, to meet this symptom, as digitalis; owing it is considered, to its control over the action of the heart and arteries.

In the incipient stage of the disease, external counter irritation should never be omitted. This may be accomplished either by blisters, setons, or issues. Small doses of tartar-emetic are found very useful in this stage of the disease, in promoting and keeping up, as it will, a moist state of the surface. Says Eberle, speaking upon this subject, "unquestionably the most efficient of all measures for counteracting the tendency to phthisis, or arresting its development or progress, is a removal to, and a residence in a mild, genial, uniform and salubrious climate." Now in making such a statement he is doubtless correct, but the question is, where is such a climate to be found. Many places have been pointed out from time to time, as affording such a climate, yet when tried, have failed, most of them, to answer to such a

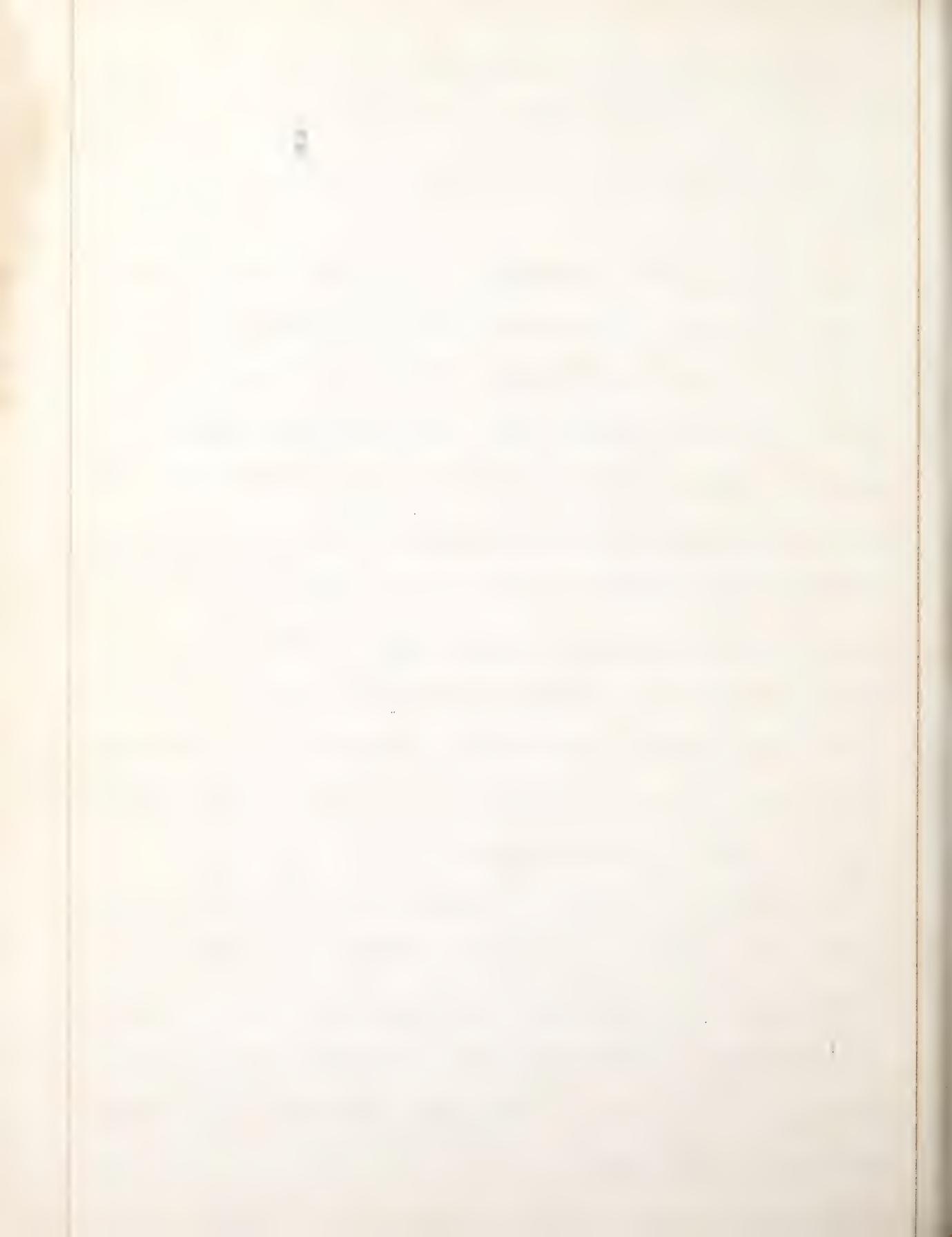
description. It is now believed by some, that one as good, and perhaps better than any other, may be found in some portion of the interior of Florida.

When the disease has become fully established, we can no longer expect permanently to arrest its progress by any remedial agent, or measures, within our knowledge. We should therefore apply remedies to palliate as far as possible the most painful symptoms. To relieve the morbid irritation and thus enable the patient to get sufficient rest, opium in some of its forms, is much relied on, and is a good article for that object, though doubtless some other of the narcotics might be found to answer as well, and perhaps even better, especially in some cases.

For the night sweats which occur more particularly in the advanced stage of the disease, the acetate of lead is thought to be one of the best remedies.

To palliate the cough, an expectorant of some kind will be found highly useful, and should never be omitted.

Elisha. G. Peck



XI.

Dissertation
on
Percussion and Auscultation,
as applied to Pneumonia.

By
Levi Peck,
of Sing Sing, N. Y.
Candidate for a License.

On Percussion and Auscultation as applied to Pneumonia

The discovery of Percussion connected with Auscultation and its subsidiary physical signs, have been two the greatest boons ever confided upon the Medical Science, by the genius of Man,

It is on the discovery explanation and connection of these signs with structural changes, afforded by Auscultation and Percussion, that Laennec's and Venning's imperishable fame is founded. The former has converted the ear into an eye, that the hidden recesses of Mental diseases may be laid open to our view, while the latter has demonstrated to us that the same sound which is evinced in health by striking upon the chest, does not exist where the lung is obstructed, or the cavity of the chest filled with fluid, the two phenomena conjoined affords a new help in the detection prevention and cure of the most widely spread disease that afflict Mankind.

owing to the presence of air which constantly fills the lungs, and consequently a great portion of the cavity of the thorax, a clear sound ought to be yielded over the whole extent of the chest, more particularly its anterior part when lightly struck, a fact well known to the ancients as well as to the common people of the present day, who frequently strike their chest, and congratulate themselves upon their soundness, as shown from their prodding a distinct hollow sound, Hence it would appear from an acquaintance of this fact, his, that the same sound cannot report in health with that of disease, that it would have led to the discovery of this science, so many ages had passed away, though this reflection appeared never to have occurred, until it occurred to Hohenbrygger in the middle of the last century, and who after seven years silent research, amid laborious and disgusting investigation as he informs us, gave his discovery to the world in a small pamphlet, the only attention paid to his valuable discovery was a slight notice from Van Swieten and Stoll, who however soon neglected it, and he died unnoticed of the celebrity his discovery was destined to obtain, and not until after a period

of thirty years was it rescued from the oblivion into which it had fallen, while on the other hand time has shown that the principles of Laennec's Mode of diagnosis were not the idle fancy of an enthusiast, which was destined only to be received, but that the genius of rational induction was the only power under whose guidance he pressed on to the fields of his discoveries.

The usual mode of percussing is to allow the patient either to sit or stand, with a thin dress upon the chest. While the fingers of the operator should be united in one line, the thumb used to maintain them in close apposition by being placed at the junction of the second or third phalanges of the index, the end and not the face or pulpy portion of the fingers, should be used to strike with, at the same time observing that in case the muscles covering the ribs are thick and flabby we should endeavour to procure their tension by stretching and compressing the integuments with the fingers of the left hand, and strike upon them with the fingers of the right hand. When a slight difference of sound is only produced by percussing both sides of the chest successively, we should remove to the other side of the patient, when

an entirely different sound will be obtained, A preception never to be omitted in doubtful cases, as the sound most dangerous in the first trial, will now yield a sound inferior to the other,

I will not occupy time by describing the character of the sounds derived from different parts of the chest, Merely Mention the character of the sound derived from the subclavian region, and dismiss this part of the subject, This region includes only that part of the chest covered by the clavicle, When percussion is performed upon the middle, or external extremity of this bone, a very clear sound is produced, its humeral extremity on the contrary yields a rather dull sound, An acquaintance with the healthy and morbid sounds of the chest in this region, is of very great importance, as from it the first indication of tubercles in the lungs are derived,

I will now direct my remarks to Auscultation which admits of a wider scope for the attention and practicable observation of the Physician, as we are aware that Percussion is but the handmaid of Auscultation, and when used alone

No exact and certain results can be obtained compared to the infallible accuracy with which Auscultation reveals the condition of the contents of the chest in disease.

Auditive Auscultation then is now the adopted means by which we are enabled to hear and distinguish the various sounds produced by the vibrations of the viscera of the chest, either in health or disease. And which by a comparison of the two, we are at once in the possession of a knowledge of the true state and condition of the vital organs.

The respiratory murmur is that kind of vibration produced by the penetration of air into a multitude of small cells dilated to receive it, sometimes called Pulmonic Respiratory Murmur, and is recognized by the ear as being soft and silken. The sounds from the passage of air in the Lungs the Trachea and the Bronchial branches, are different in each locality, being more harsh and defined of that vibration which is produced by the dilation of the air cells.

Though slow indeed of developing this beyond the limits that day time will allow, it will pass over the truant Auscultatory Phenomena of each individual modification of sound, and briefly shew the situations occurring in the Murmur.

in the three stages of Pneumonia, that being the ~~order~~^{My subject} of ;
In the first stage of inflammation of the air cells, the lungs undergo an accumulation of, and consequent exhalation of blood on the internal surface of the air cells,

Hence the Lung is more solid and heavier than before,

though it still crackles under our fingers after death, a circumstance that leads us to expect that there is respiration in the parts during life, and that is the case, as it is distinctly heard, And the same conclusion would lead us to infer that air is admitted, We can all on dressing hear a hollow sound, and such also is the fact,

but the respiration heard in the first stage of inflammation, is accompanied from the commencement by a crackling sound a depositus bronchi, instead of the ordinary murmur of respiration, the Murmural respiration, and is in comparison new to that sound produced by rubbing slowly and firmly a lock of hair over it, it conveys the idea of numerous and minute and almost tiny bubbles, and the sound is heard with more facility the nearer the inflamed part — it is to the surface it is a stage characterized by an accumulation of blood, and rapidly advances on to the second stage wth the inflammation becoming more intense, which stage

is denominated ^{the} ~~Preparation~~, from the Lung being so firm as to resemble Liver, though the term is not so appropriate as ~~Consolidation~~ of the Lung, a Lung that is impervious to the air, one that will not crackle under our fingers after death, an essential circumstance to a ^{dry} permeable Lung.

~~The Symptoms of this stage~~

are readily anticipated, as a Lung that has become solid, of course, however that part, no sound can be produced by percussing that part of the chest, other than that obtained by striking over the region of the Liver, and as a Lung thus impervious to the air, as a matter of course cannot yield the usual Desperately Murmur, even in the slightest degree, and there being no murmur heard, there is no Crepitant Respiration at all in the part, and hence no crepitant ronache, though from Solids being better conductors of Sounds, we have Bronchial Respiration instead of the previous, and we hear the voice of the patient, if we cause him to speak in the small bronchial branches, and which is greatly increased if the solidified part happen to be near a large Bronchial tube, called Bronchophony,
Its Inflammation of the Lung, has a tendency to suppulate if third stage occurs at an advanced period,

A peculiarity in suppuration of the Lungs is that the Sputum is effused, and not collected into an abscess, after the second stage, when the third begins, the Lung is as solid as before, and hence no hollow sound is heard on percussing, neither is there any respiratory murmur, but a loud Muco Rattle a rattle which we may never recognize by remembering the sound occasioned by air passing through soap bubbles. The Muco Rattle is heard in the Bronchia either from some of the Sputum going into them or from a secretion from their own Membranes.

An excavation may be formed however in the Lung and giving rise to a peculiar symptomatic sound of voice Rectrotopy, which is that phenomena produced by a cavity in the Lung in the first place, in the second the bronchial tubes enter this cavity, and as air enters, the same state of respiration there as in the Larynx, if we place the Stethoscope over the Larynx we have the voice travelling the tube as though the mouth were at the other end, and just the same occurrence takes place when the Stethoscope is applied over a cavity in the Lungs;

Phenomena is frequently fatal

when it has not advanced beyond the first stage, but
should the disease be stopped by art, if the Inflammation
yield, of course the Lung goes through the same stages
as before. Though in an inverse Manner, the third
stage comes to the second, and the second to the first,
and it is found also that the signs undoubtly noticed, goes
through the same inverted course,

By the auscultatory phenomena
heard in the second stage disappeared, and those ~~which~~
which occurred in the first stage we hear again,
Suppose the disease has only gone into the first stage,
on Percussion we hear the hollow sound as in health, on
employing the stethoscope, we hear the crepitans rhonchi and
even a crackling, but if the Patient is being cured, the
crepitous rattle declines, it is less distinguished each
successive day, and in its stead we hear the respiratory
noises more and more distinct,

Suppose the second stage has been reached and the patient
is recovering, the want of a hollow sound on Percussing gives
way, and we hear by degrees a little hollowness of sound
which also increases gradually until the sound derived is
as hollow as in health, The crepitous respiration

I mentioned had cured from the lung becoming solid, but now may be heard a little crepitous rattle, which increasing as it does each day, becomes distinct, as in the first stage. It passes through that, the crepitus rattle diminishes, and the natural vesicular murmur becomes more and more distinct.

The third stage is characterized also by a want of fullness of sound, but there was a minor rattle heard from the air occupying the bronchial tubes. This however declines supposing the patient to be getting well, and we hear a crepitous rattle from the air cells being freed from their fluid contents, and air again penetrating them. The throat is again hollow to the stroke, and finally the crepitous rattle gradually declines, and the healthy murmur is established.

In speaking more fully of the anatomical characters of the lungs, in ~~the~~ ^{Speaking} ~~examination~~, it may perhaps be as well to note how far these interesting phenomena correspond with them ~~most~~ ^{most} ~~marked~~ ^{marked} characters.

In the first stage of pneumonia the substance of the lung presents an excess of weight and density. It is infiltrated with a frothy, sanguinous exudate in considerable quantity. It still crepitates on pressure, its alveolar texture can be recogni-

colored, the external surface is a deep violet, the interior is pale or less deeply red. In the second stage or that of "Hepatization rouge," it no longer deputates on purple. It preserves the heaviness, appearance and density of the liver, its texture seems unchanged when torn, its external surface is not so much of a violet colour as the preceding degree, its internal is red and presents some white spots, caused by the pulmonary cells and vessels, these are occasionally mixed with black spots, similar to those observed on the surface of granite. The sanguineous density with which it is infiltrated is diminished in quantity, and does not stickle out when a section is made.

In the third stage or that of "Hepatization grise," the interior of the lung becomes of a pale yellow tinge, its granular aspect becomes even still more manifest, a purulent fluid issues from it on incision, which may be collected by the scapula, lastly the pus infiltrated into the substance of the lung may unite in some points and then gradually increase so as to present the appearance of the mucus, the vessels of which exhibit no trace of false membranes, on the contrary they are softened and broken down, so that not a trace of their original structure remains.

Thus it may be seen what relation the Morbid Anatomy of the Lung, bears to the Clinical Signs which the lung evinces, decided by Auscultation and Percussion.

In the first stage, the condition of the Lung noticed sputuminously, gives sufficient cause to the crepitation which is heard, as it arises from the feeble passage of air through the sanguineous density already noticed. In the second stage, it is also evident from the Morbid State of the Lung, that there can be neither silent nor Crepitous respiration in life.

And in the third Stage, the pathognomonic signs acquired by the ear, sufficiently prove the Lung to be in the precise state, in which it is found after death,

On the second Stage as the inflammation advances, the fluid which occupied the air cells becomes more thick and viscid, than no longer be expelled from the vesicles in which it is formed. It accumulates, obstructs, and distends them, and so gives rise to those granulations, which give to the Lung its hepaticized appearance in the Second degree of Pneumonia, at a later period, it is not mucus or blood that is poured out, - it is pus, which in its turn fills the air cells, and so constitute the

grey granulations which characterize the last stage of the suppuration give, hence the suppression of the expectorated bronchial mucus. If a portion of Lung in this state be pressed, we see the pus creeping in the form of drops, each seeming to come from the vesicle in which it had been contained, if the irritation of the cells be general and carried to a great extent, they burst, their contents become blended and so the granular appearance is lost.

The walls of the vesicles become soft and friable, just as all tissues do when inflamed. Hence the remarkable softening of the substance of the Lung in Pneumonia.

In the third stage a violent effusion takes place in the affected part of the Lung, the movements of the chest become more restricted, weak and difficult, symptoms of general debility supervene, the mucous rattle is heard, at first in some points, then in the whole of the affected part.

This degenerating into a gurgling sound, indicating that the pus is collected into ~~the~~ mass, & cavity, from which it creeps by the neighbouring bronchi, and so, a perfect spectatology is established by means of this communication between the cavity and the air-tubes.

Thus I have endeavored to substantiate the importance of auscultation and percussion, by observing the Pathognomonic Signs that occur in the three stages of Pneumonia auscultation and percussion as it is applied to pneumonia, being the subject upon which I am engaged

The discovery is a beautiful illustration of man's genius in striving to gain the limit of skill, from which he may retard the too rapid approach of the fell destroyer in his majesty of power, and also illustrates the practice of this discovery to be something more than a philosophical observation

It is an intellectual gratification, and surely indeed must be those who will not employ their ears for the purpose of knowing as indeed they may know, the absolute condition of the Pholice River, or unwarily would they were ~~desirous~~ it possible for them to employ their naked eyes, and vain is it for them to ~~want~~ that the phenomena of disease is known to them when they obstinately refuse to avail themselves of the means given them by nature to detect disease,

and vain is it for them to ~~want~~ that they can form an accurate diagnosis in all cases, for it is a fact

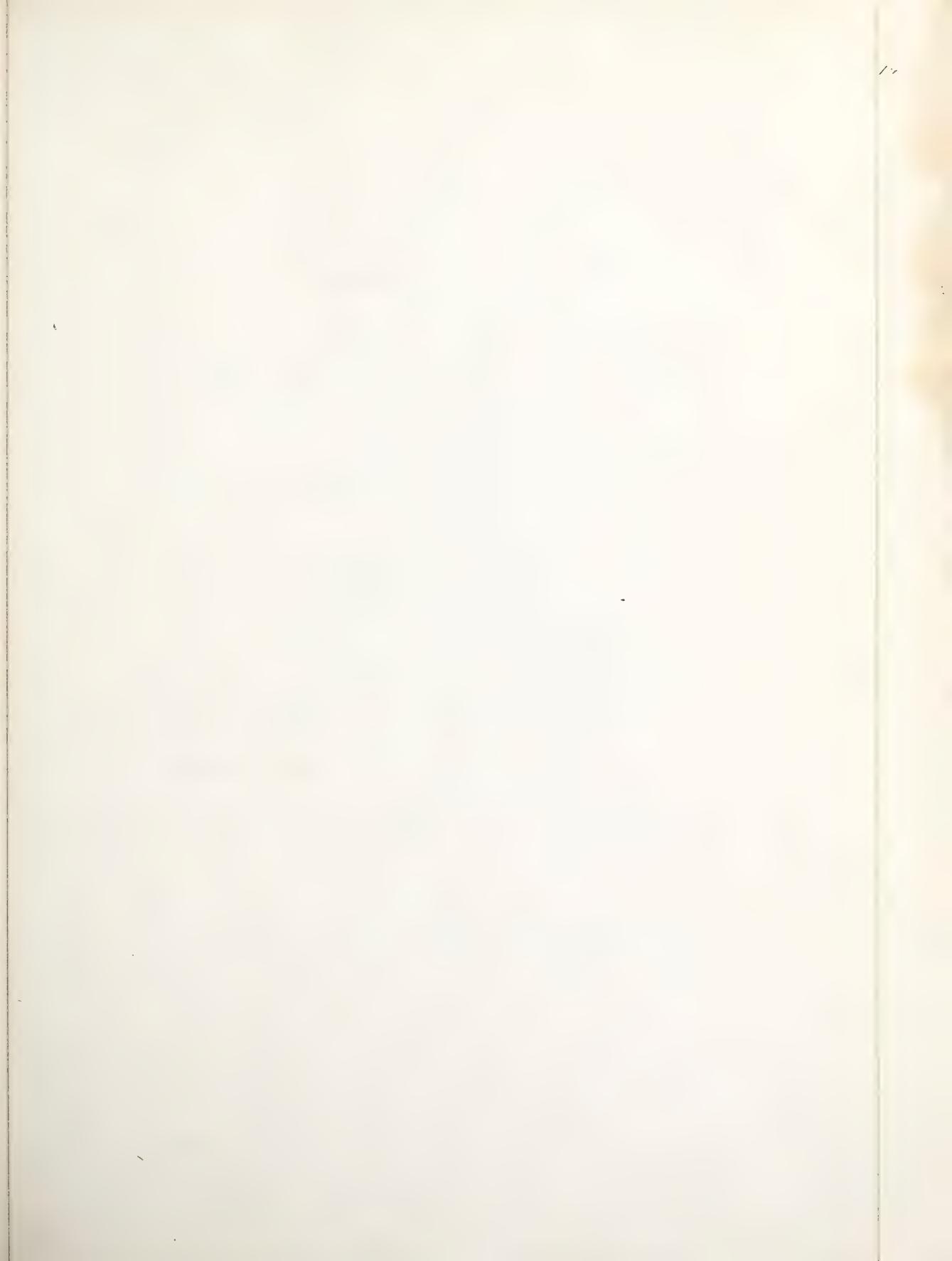
that those same persons are continually lamenting that the medical writers are so uncertain, and that they are continually mistaking diseases of the heart for diseases of the lungs, and diseases of the lungs for diseases of the heart

And if Pneumonia suddenly attacks during a chronic affection of the chest, they at once ascribe the symptoms to effusion to pleuritis, to dropsy of the chest, or some other frightfull occurrence

While on the other hand, every well informed person admits that the discovery of Guenée and Hoenbeger has effected for Medicine what, Cletit and Desault have already done for Surgery. For if a catheter, introduced into the bladder, gives an assurance of the existence of a foreign body in that viscus, Pectotilogy is no less decisive test of the existence of a pretornal excretion in that part of the lung in which it is perceived. Nor the suppression of the natural sound of the chest on percussion less decisive evidence of the existence of fluid or impurities in that part over which it is noticed.

Levi Beck





~~XII.~~

—
Dissertation
on
Intermittent Fever.

—
By
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Intermittent Fever.

Our knowledge of the existence of fever is intuitive, therefore, its definition is unnecessary even if it could be given.

The symptoms of different fevers only require a description that they may be known when called by their particular names.

As the causes of fevers are differently described in the description of different fevers will be different and as most agree in their description of intermittent fever I will try to describe that form, as it presents itself to my imagination from reading authors as I have seen very but two cases, which were in fact nothing but imitations of the genuine ague.

Cause. Intermittent fever generally has been ascribed as the consequence of exposure to Malaria or Miasm generated in marshy places, but intermittent fever has existed in places distant from marshes and among persons who have never visited any of its residences, yet not sufficiently to prove - that Malaria is not frequently a direct cause. What is Malaria? This question has been variously answered but not satisfactorily because the term when defined and traced down in its definitions amounts to a visible nothing and the only way I can answer it, is, by saying it is that something which we seem to be nothing that causes intermittent fever; and

as it is a cause of dispute, why not a cause of ague?

It would be indirectly if disputes were produced agues and I believe they do, at least the hot stage. I shall call them all those influences that keep produce intermittent fever by the name of Malaria. The cause of intermittent has been ascribed to the presence of insects similar to the Acanthocephala which carry different sized bags or pouches containing a virus, that those with little bags produce intermittent; those with greater bags remittent; and those with the greatest bags the plagues. Intestinal worms, the suppression of habitual discharges and fright have been reported as causes - also by the Indians water poisoned by a snake. By another person whose opinion in disease convinced all of its correctness on account of his superior discrimination and ability to detect and analyze symptoms. Alterations of temperature, excessive heat and heavy dews as well as mentioned as causes and also heat like China intermittent fever moves in a certain cycle - If these alterations are the causes of intermittent fever why should the margins of pools, shores of rivers and marshes be the locality of ague in preference to the joining country as the dews and heat fall equally upon them.

At times ague is prevalent here. Is it produced by atmospheric changes? If it is, Why is it not more commonly produced here? Because it is said it only comes in its cycle. Then if it possesses a comet-like locality ague can not be caused by the common changes but by those special alternations of temperature which accompany this cycle of intermittent fever. and if these alternations why not give a special name to these changes and call them malaia.

Men encamped to the leeward of a marsh have the intermittent fever, those to the windward do not. If there was not something more than the mere changes of temperature, Why should those to the leeward only have ague and those to the windward be exempt?

Civilization has an effect to check the development of intermittent fever but I believe the heat and dew remain the same and ought according to the above theory to produce ague the same as before. The peculiar residence of aques proves there must be some peculiar property in that locality which may be called Malaria. Miasm or anything else suited to the imagination of the writer. No one doubts the contagiousness of Small Pox through the medium of the air, but if that air was "bottled up".

sent to the Chemist and analyzed, it would not differ from the analysis of common air, therefore because the peculiar virus can not be detected by chemical analysis it does not prove the non-existence of noxious qualities.

Just in the same manner because the air in malarious districts when analyzed does not show some peculiar property, it does not prove its non-existence. It only proves that Chemistry has been unable to find a test to detect such properties as it also is unable to discover by analysis the presence of odors in the air.

It does not require the Chemist to detect the presence of this property in the atmosphere. Any anti-malaria man can do it if he will use himself as a test and he will be sure to register upon his own person the invisible malaria, visibly.

The susceptibility of persons to this disease is very various. It has been known to attack persons debilitated by accident or previously so in preference to the robust; it also attacks persons of middle age more than all other estimable & life probable men in their engagement in more active business and consequently exposed more to the influence of the malaria.

Strangers are more subject to intermitent than those residing in a que districts and persons having had an attack are not so liable to have it again as those who have not. Residents of malarious places are described as "puny, ballow and sickly, feeble in body, spiritless in mind, as having yellow faces, swelled bellies and wasted limbs, as being melancholy, phlegmatic and short lived." The Negro is the only exception, using the language of Dr. Ferguson "To him marsh miasmata are in fact no poison, The warm, moist low and lurred situations, where these pernicious exhalations are generated and concentrated, prove to him congenial. He delights in them, for there he enjoys life and health, as much as his feelings are abhorrent to the currents of wind that sweep the mountain tops, where alone the whites find security against endemic fevers." There are certain laws concerning malaria which have an important bearing upon those living within their jurisdiction, viz., first. Malaria are evolved with the vapor during the middle or not part of the day, and at night fall down the ground condensed as to their noxiousness and

wind blowing them down the ground
until the heat shall cause them again to rise mingled
to vapor.

Second. Malaria are carried along by the winds
and thus are able to fix their habitation in various places
and to dose the defenceless inhabitants without a knowledge
of their invisible approach. The extent to which they
may be carried is unknown but some authors assert
they have retained their virulence three miles.

Third. They lose their activity by being diluted largely
in the atmosphere and thus afford a fact as proof
against the Homeopathic doctrine of dilution. Whether
the mere dilution destroys their noxious properties or
whether they have an affinity for other substances and
by their decomposition form inert compounds are questions
too far in advance of any knowledge of chemistry to answer.

Many circumstances could be quoted to prove that
the Father of Intermittent fever uses the Winds for his Chariot,
but the following will be sufficient. Thirty ladies
and gentlemen upon a sailing excursion, breathing
the air coming directly to them in full blast from the
neighboring marshes, were immediately after attacked

with Febrile ague, except one who only from the whole number escaped.

Fourth. When malaia are blown over surfaces of water their noxious properties are destroyed.

Fifth. Malaia are attracted and adhere to the foliage of forest trees and thus afford security to the inhabitants who live near. The trees forming such a shield are held sacred and would not be permitted to be cut down sooner than a door would be suffered to be opened into town for the entrance of Death.

Sixth. Cultivation and draining have been considered as preventives to the generation of malaia, because some places which were very noxious before, have lost that quality and because places upon a cessation of cultivation have resumed their virulence.

The more the subject of malaia is investigated the more wonderful does it seem and as the doctrine of putrefaction is now considered unnecessary for the production of malaia, so does it seem that marshes are not the only places necessary for their generation. Dr. Ferguson gives many instances showing

the source of infection is in, in a desolate
of vegetation - as large sandy plains that when they
are drenched with rains and receive a great heat
from the Sun, they are very noxious. If this is
true that the Ancient Elements, Earth, Air, Fire
and Water are alone sufficient to generate malaria
it seems as if young Doctors might at any time manufac-
ture with the above ingredients any desired amount
of business. All that would be required to produce
intermittent fev., could be done by taking advantage
of a strong wind to the windward of a town near a
sand bank and placing the sand in large shallow
iron pans - first showering the whole with water then
kindling a fire underneath. a rapid generation of
malaria would follow, and if the distance was not
great nor woods intervening nor water to pass over -
the inhabitants would all be shaking with cold in the
mides of summer. It is said by some,
Malaria have no choice of soil for their habitation.
They are generated in sandy, clayey or rocky lands
and as the susceptibility of persons to this disease is
very different, it seems as if the base of the compound

uniting with malaia to form intermittent fever might be found in man. Debility has been considered as a predisposing cause and malaia an exciting cause and that a person would never have ague unless exposed to debility. That the exciting cause sometimes acts first and waits patiently until some unlucky accident ^{occasion} shall debility sufficient to set the chills a going. It has been said the more concentrated the virulence the less would be manifest the intermission and hence near the border of a marsh the fever would assume the continued form : at greater distance the remittent and still farther the intermittent and this has been proved by men encamped at different heights on mountains at the foot of which lay a marsh, by those at the bottom suffering with continued with more marked remissions according to the ascent until at the top it became intermittent.

Cause of intermission. Willis described the intermission as arising from a periodic formation of the blood, Reil says the intermission is owing to some "general law of the universe" as the alternation of light and

darkness, the ebbing and flowing of the tides, the regular change of the seasons, the regular and involuntary calls of Nature as Hunger, Thirst, Sleep &c. Bailey's explanation is - the alternate position of man from the Recumbent to the erect every twenty four hours and offers as proof the non appearance of the disease in animals - Rocke says they are periodic because the causes are periodic - that the parts of the season in which they most prevail are more changeable in temperature, that through a part of the day the effects of malaria are feeble, that at another part they are energetic and violent, and goes on to prove the return to the influence of habit. The effects of habit in sustaining periodical action is shown in the case of a person who took a cold bath at midnight for seven successive nights in the month of October, The first time remaining in the water fifteen minutes - the second half an hour and so on until he was able to stay in the water an hour, After each bath he went directly to bed and experienced much heat which was followed by copious perspiration during which he fell asleep. After the seventh night there was no more bathing but the

regular phenomena of an ague appeared in the next six successive nights at the same hour.

Cullen considered a "diurnal revolution" in man to be the cause of the periodicity. How are we to know which of the many hypotheses is correct when the oldest logicians of medicine disagree? Our conclusion must be that the present age of medicine is too young to explain every fact and that the phenomena of intermission will be under the necessity to remain some time longer a puzzle to physicians.

Symptoms. By whatever cause intermittent fever is produced, its symptoms are very regular and have been universally divided into the cold, hot and sweating stages. They are described as three separate parts although the whole is one continued scene of action.

Before a person has an attack of ague he feels unwell as if he had better put off his present business until some time when he is better. His uneasy sensations increase and he feels lazy, listless and is inclined to sigh, yawn and stretch himself.

These symptoms are called premonitory as indicating a speedy attack. He soon experiences a sensation of weakness

and distresses a soul in agitatum - He feels chilly particularly in the back along the course of the spine and from thence radiating over the trunk and extremities which has been compared to the feeling of cold water trickling down the back. The blood leaves the capillaries he looks pale, his features become shrivelled dry and rough and his whole surface is diminished and is thought to resemble the skin of a goose. He now feels very cold, he shivers and trembles, his teeth chatter and in some instances it has been reported "loose teeth were shaken out and fractures of the jaw produced".

The bed trembles on which he lies so as to shake the room, his knees knock together, his hair bristles from the constriction of his scalp - his features - face, lips, ears, nose and hands turn blue. His respiration now is difficult and hurried, his pulse is small, quick and feeble, he has pains in his joints and sides, his voice trembles and fails his tongue is white and dry but sometimes moist. After the continuance of this state of distress for some time, the chills are alternated with flushes of heat which commence in the face and neck; gradually the chills cease entirely and the entire body becomes hot; the skin is glazed and smooth

but becomes very dry, hot, and pungent, there is great thirst, the bulk of the body is restored, his face is red and turgid, his respiration is rapid even for a short time and becomes again hurried and oppressed, his pulse is frequent full and hard, the temples throb, the head aches, the urine is scanty and high colored, the tongue is white and dry, the patient turns over often, throws his arms about, is very uneasy and restless.

These symptoms are relieved by the application of the skin of the face becomes moist and a moisture gradually extends over the entire body until a profuse perspiration is produced so that his clothes are completely drenched, the thirst ceases, the tongue is moist, his pains are gone, breathing and pulse are natural, the urine is plentiful and deposits a lacteal sediment, his perspiration is also less and the skin has an appearance of coolness, there remains some slight languor and debility, These symptoms generally attend and sometimes there are local affections, mixed with the fever when the symptoms of the local affection will be added to those which are mentioned and will describe, also the symptoms of the internal fever will add to those

D omit -

to the danger of the patient. The most frequent of these local complications is the gastric, in which there is inflammation of the mucous membrane of the stomach. The symptoms peculiar to this, will be intense pain in the epigastrum, great gastric disturbance as nausea and vomiting, the countenance pale, the pulse small and quick, the breathing hurried, the skin dry and hot, the tongue bright red or brown, the thirst great, the urine scanty and high colored with a yellow tinge and great prostration of strength.

When complicated with cerebral disease there will be intense pain of the frontal region, incapability to bear light or noise, great difficulty in directing the thoughts, in stupor & coma, eyes fixed with half open lids, sometimes convulsions and all the symptoms of inflammation of the brain. Complications with inflammations of the lungs, affections of the heart, liver, spleen &c have been described by some authors. Intermittents have been considered salubrious and prescribed as a medicine to cure other affections. People have visited aquish districts on that account and if they did not succeed have loudly complained of their inability to catch an ague. Dr. Sims was one of this number. The three stages of ague are called

a paroxysm: the time passing from one paroxysm to another is the intermission and the time including both paroxysm and intermission is the interval. The paroxysms differ in duration according to their nature. The cold stage varies from a minute to four hours and the hot from four to twelve. When a paroxysm occurs every day it is called a quotidian, every other day or forty-eight hours a tertian, more than a day or weekly two hours a quartan and so on as high as octavans, and there is mentioned a person who had an annual occurring always on his fifth day.

The name given to a quotidian takes place in the morning before a tertian at noon and a quartan in the evening.

These rules are generally followed very promptly unless the disease is about to leave when the paroxysm comes later and is said to postpone, when earlier to anticipate.

Double and triple tertians and quartans are mentioned among the rare and strange in which we seldom hear of them would be almost an unuseable collection if we did; any one would take the trouble to collect them from the many imaginary authors. The duration of a paroxysm is different in the different species. In a quotidian it

is ten or twelve hours; in a tertian six or eight; in a quartan four or six; The paroxysm may be deprived of either of its stages, it may occur with cold shivering, or the cold and sweating without either the shivering or the sweating without the other two: this kind of paroxysm occurs generally at the termination of fevers or it may occur at other times and is called ad Ruum by the doct. of Paroxysms. These afflictions which occur under periodic irritation and yield to the same remedies and make their appearance with a chill and their departure with a crisis are styled Masculine Agues. There are forms in which the periods of a paroxysm follow no general rule, these are called Erratic Agues. Intermittents have been divided into Vernal and Autumnal; the quotidian type prevails mostly in the Spring; the quartan in autumn and the tertian in Spring and autumn and consequently is the most prevalent, Post Mortem. The morbid appearances of those dying from intermittence are an inflammation of the blood vessels and substance of the brain - disease of the Liver, Spleen, Stomach &c. The cortical part of the brain when cut is more red than usual with spots of blood.

and often softened. The arachnoid coat is thickened and injected with numerous vessels and there is an effusion of serum within the convolutions and sometimes mucus is found in the ventricles.

The Liver has been found very much enlarged.

Baillie found it appearing well improved & with blood slightly coagulated and of cellular bands which alone offered resistance to the pressure of the fingers.

The Hepatic ducts and Gall Bladder have been found thickened and distended with dark colored viscid bile.

The Spleen is the organ most frequently seen presenting marks of inflammation: its interior broken down and consisting of a black pulpy mass, at other times only in a state of engorgement and has been known to weigh ten pounds. The Pancreas is often hardened & umbilicated. The lungs are often enlarged presenting a dark color. The Stomach has shown marks of inflammation more frequently near the pylorus and the intestines have presented an inflammatory appearance but rarely ulcerated.

Treatment. The treatment of intermittent has been a subject of contention for various authors; some supposing it malignant, that it ought to run its course; others that it

should run only a certain length of time before any remedial measures were adopted; but now it is so ought to be considered necessary and important to check it as soon as possible. For which purpose the treatment has been divided into four parts adapted to the three stages and intermission.

The treatment of the cold stage consists in the use of diluent drinks, cordials, external warmth, & man in his usual occupation.

Warm diluent drinks made cordial for those weak and exhausted have often proved useful. External warmth applied by means of warm bath, heated air, friction with liniments or hot bricks to the feet and cloths to the epigastrium are useful in relieving the feelings of cold and have frequently cut short the cold stage. Opium is recommended in tinclue thirty drops at its first approach and if some warmth did not follow in ten or fifteen minutes, from twelve to twenty more; the effects of which are exhilarating altering the pulse from quick and small to full and large and affording great comfort to the patient. Emetics are given just before the

approach of the cold stage to shorten it, but
are now not generally used. Winding is
highly recommended by Scott Mackintosh who
states his own very great experience and that of
several others to prove it not only shortens the cold
stage but stops the disease. The blood is to be
drawn until the feelings of the patient are relieved
which has been done in the abstraction of an
ounce and a half rarely requiring twenty or a
few minutes.

Another curious mode of treatment is the application
of tourniquets to two of the opposite extremities so as
to obstruct the circulation and it is said that "applied
before the cold stage, the accession of the paroxysm
will be prevented, if in the cold stage the hot stage
will follow two hours according to Scott Mackintosh in three
minutes."

The remedies for the Hot stage are opium, blood letting,
sponging the surface with cold water, fanning, a violent
wind to diminish the temperature of the body &c.

During the sweating stage the perspiration must be
promoted and permitted to go on until all the unuse-

insations are relieved, then it can be checked by drying with towels and changing the linen.

The remedies for the intermission are bleeding, Emetics and purgatives for general treatment and the specific, are the Peruvian Barks, Quinine, Arsenic, Ferrocyanite of Iron, Salicene, Poplar Willow and Oak Barks, Web of the Black Spider, Charcoal, Pipewine, Chamomile, Sulphates of Zinc Iron and Copper, Muriate of Ammonia, Calomel Tartar Emetic ointment, Many other Tonics, Stimulants, Aromatic and Aromaticatives.

The most important and successful of all is the Quinine; it is given in this climate in doses of from two to four grains every four or six hours during the intermission or one grain every hour.

In hot climates it is said to require a larger dose as twelve, twenty and thirty grains at a time.

Sometimes it has no effect on the disease until a purgative is given and Dr. C. Watson was in the habit of giving a dose of Calomel and Rhubarb always before the Quinine,

When the Quinine fails, Forbes Solution ranking next

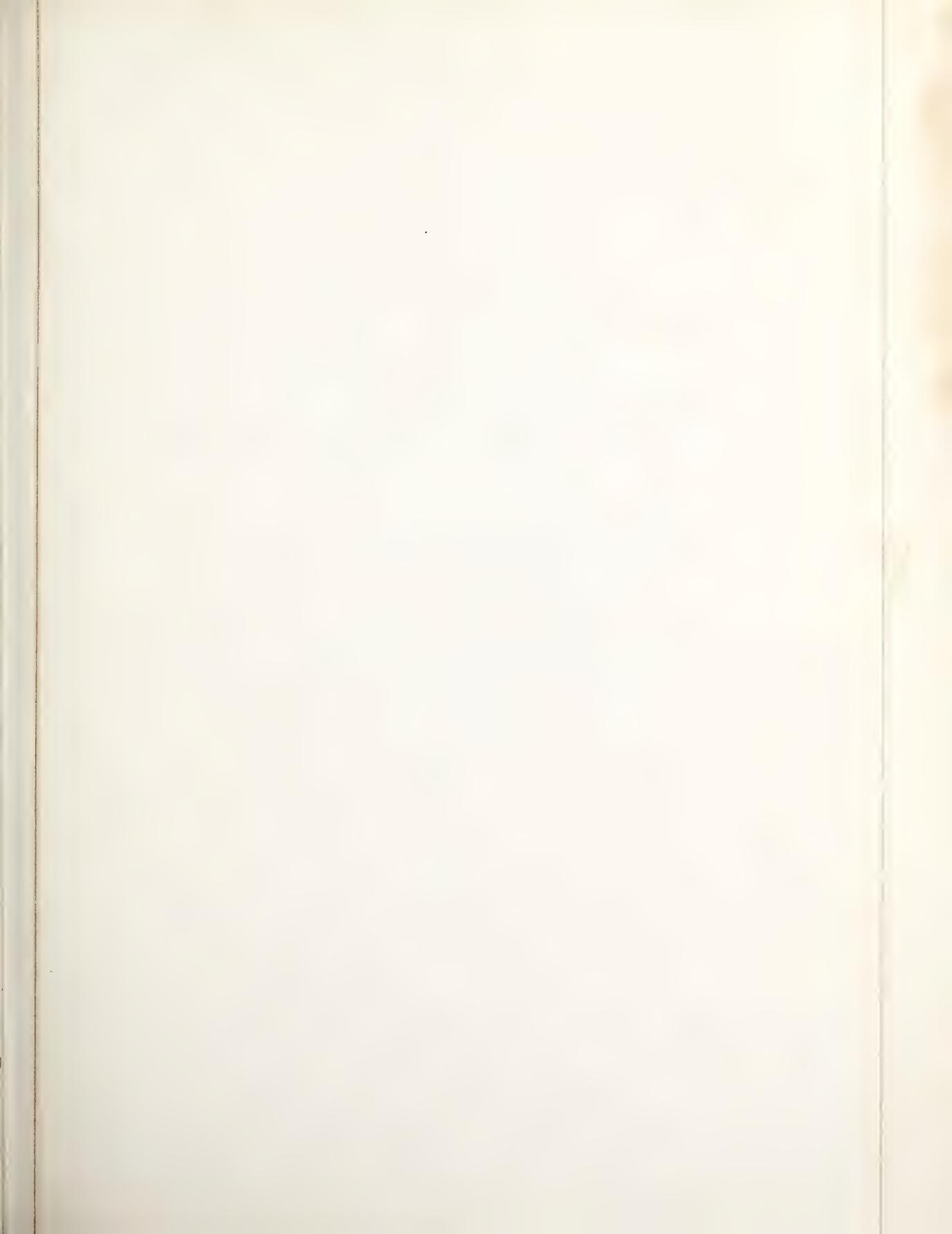
in importance is used successfully in doses from ten to twenty drops three times a day.

A combination of the two is a good form for administration, Quinine is more adapted to atonic and Arsenic to eutonic conditions, hence the arsenic ought to precede the ^{quinine} bark as preparatory in an eutonic state of the system, or evacuants ought to precede the use of the Quinine.

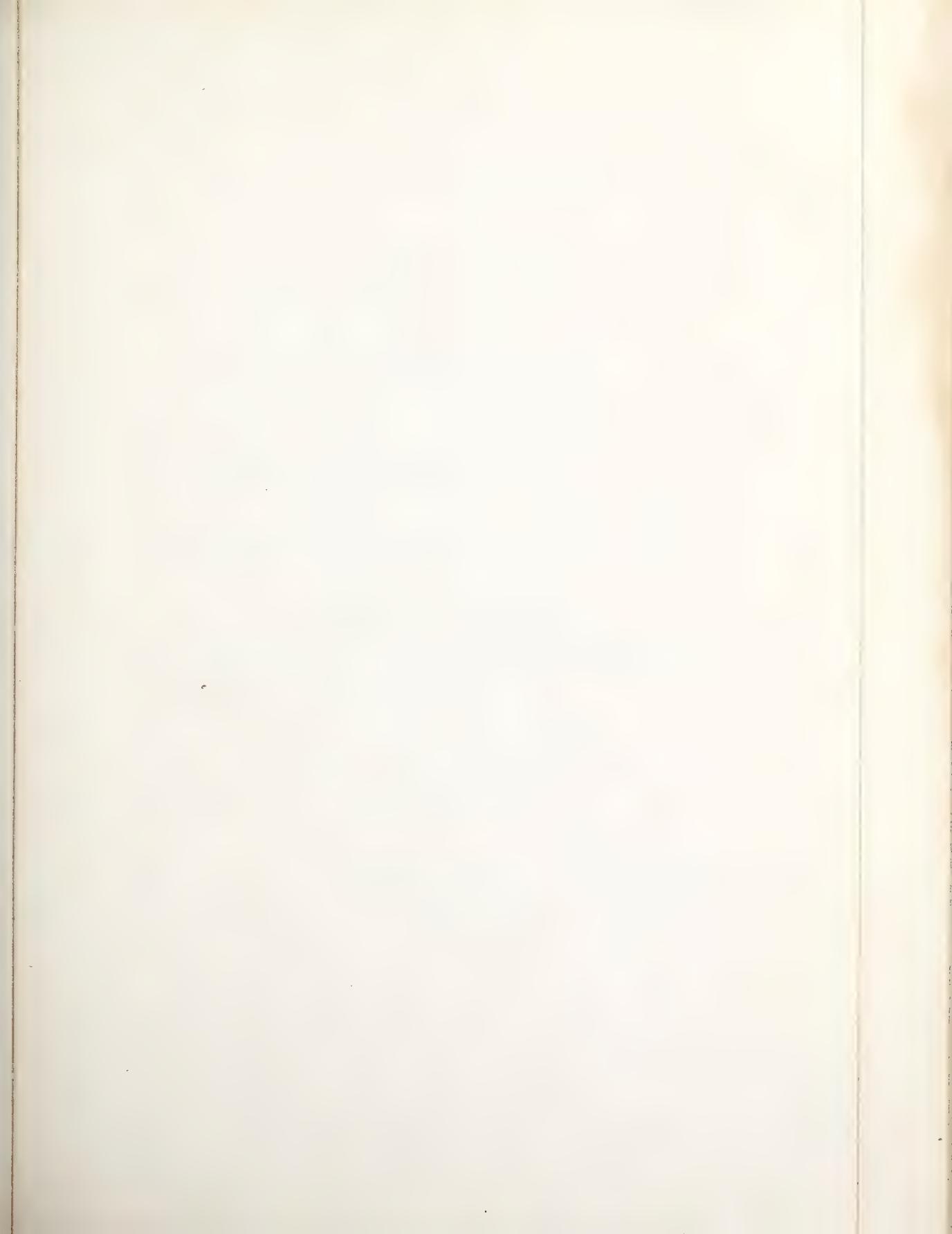
Opium given an hour before the paroxysm to the patient in bed in tincture twenty to forty drops with ginger tea and warmth to the feet will often prevent the accession of the paroxysm. Ferrocyanate of iron is used in doses of six grains every three hours, Charcoal is said to cure in doses from ten to twenty grains every six hours, Pepper in six grain doses - Sulphates of Zinc, Iron and Copper in three to ten grain doses - Ague has been cured by the influence of strong mental emotions as sudden and great joy, anger, terror &c. or by strong impressions on the imagination, producing feelings of disgust, horror or eager expectation.

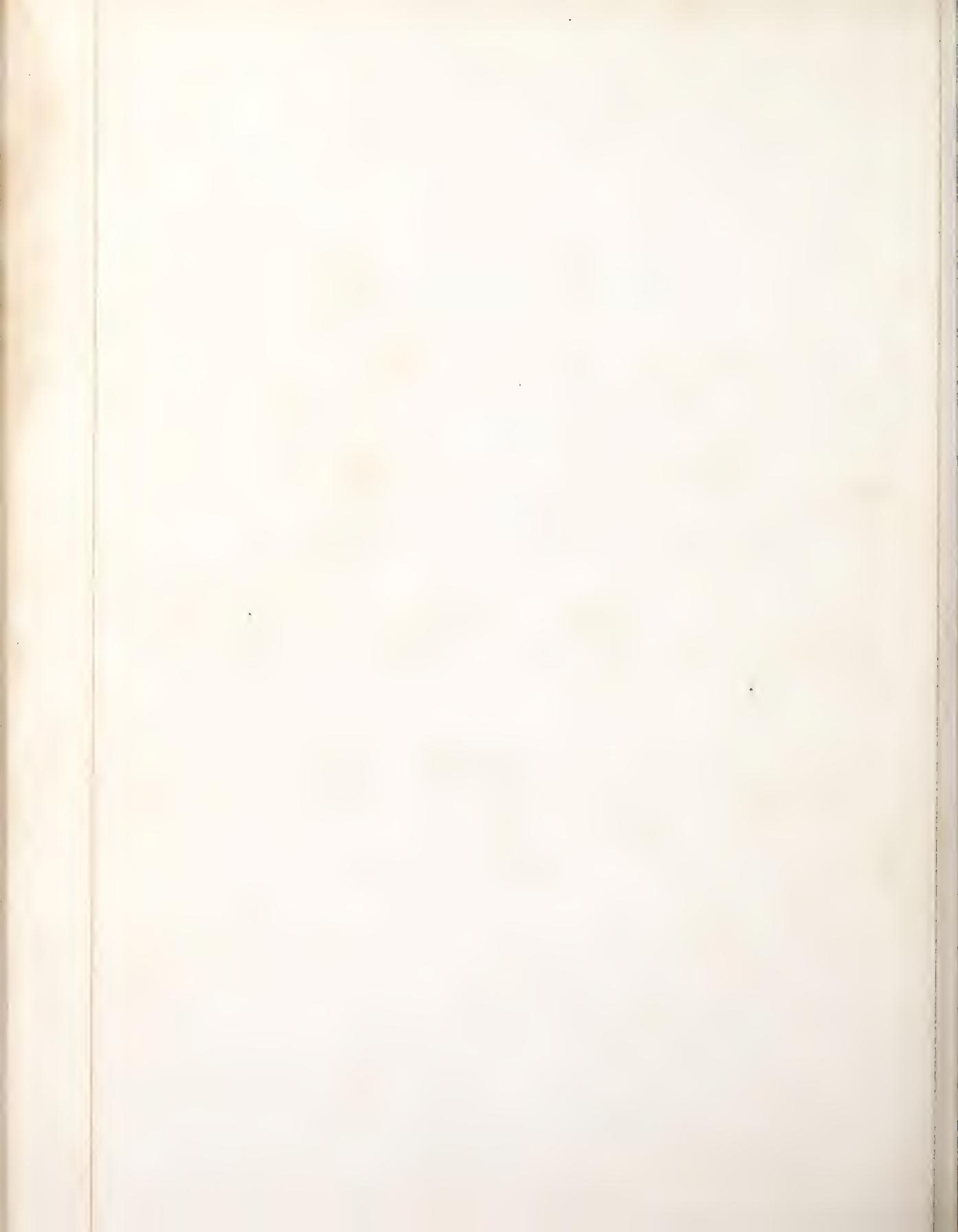
Wm. J. Porter











XIII.

Dissertation
on
Tubercle.

By
Munson Abijah Shepard,
of Danbury,
Candidate for a License.



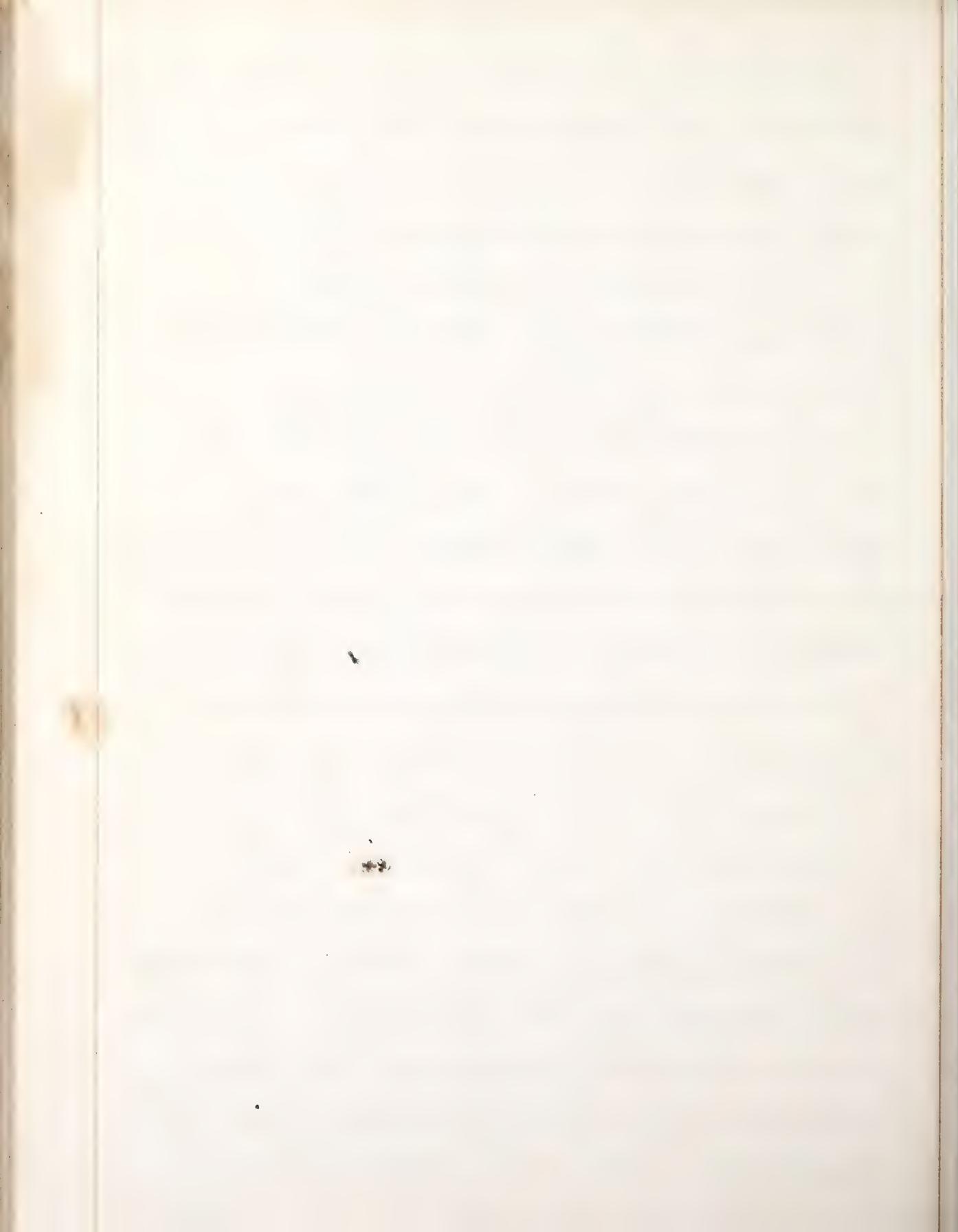
Tubercles

The term tubercle is employed to designate a peculiar morbid product occurring in various organs, in the form of a small round body; usually described as passing through successive stages; on the first appearance of tubercular matter in any of the organs it is said to consist of a fine grey somewhat transparent substance; with age becoming opaque and of a dull yellow color and caseous consistency; these characters are said to represent crude tubercle; at a subsequent but indefinite period loosing its consistency and becoming liquid it is compared to cream this is termed the softening stage.

The tubercular constitution when hereditary is so strongly marked that it is not liable to be mistaken; it is manifested by a peculiar expression of the countenance, by the form and

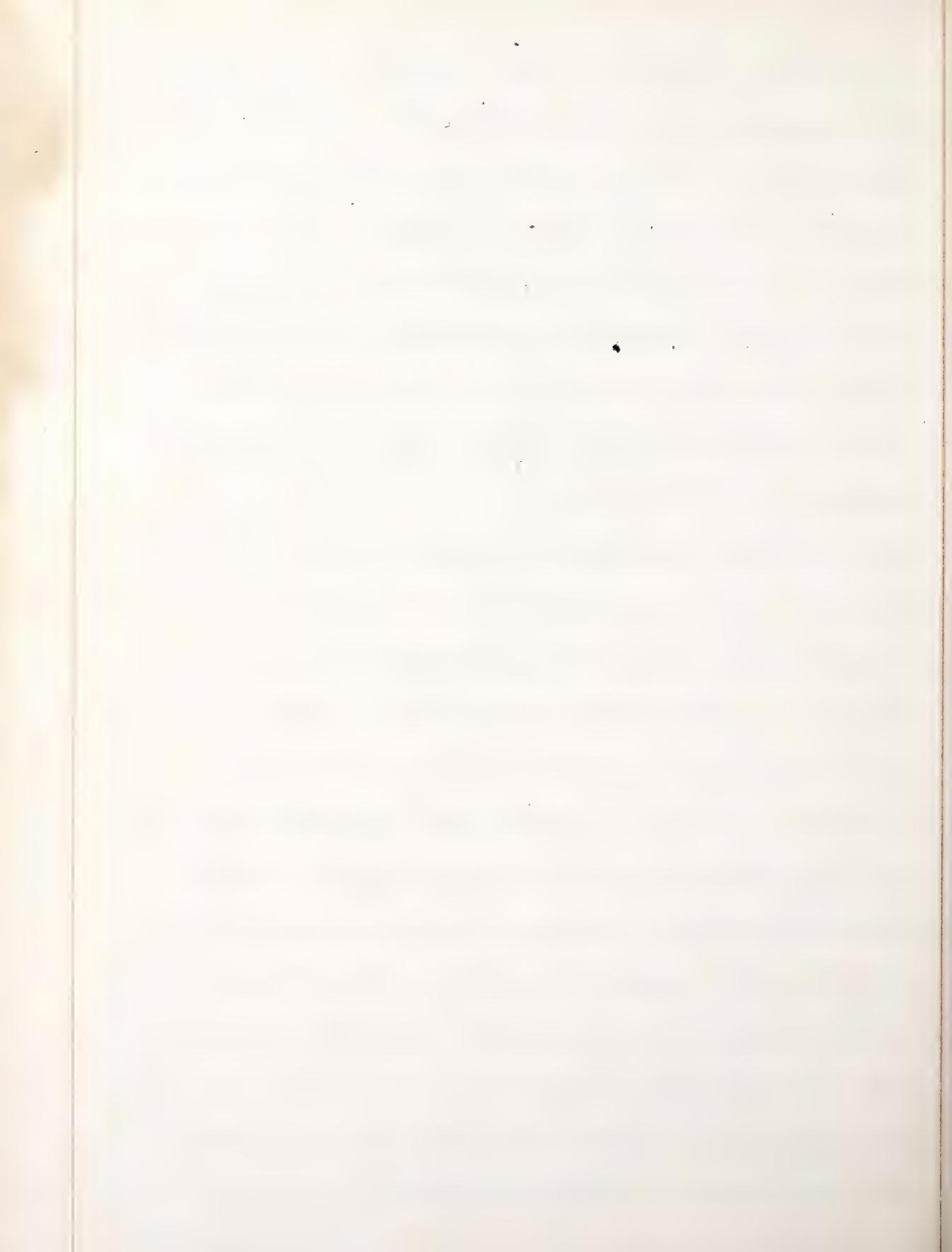


development of the body; in early childhood the countenance has a pale pasty appearance the cheeks generally full and the alæ nasi large in early childhood the form of the body is little remarkable, though usually large and wanting the firmness of health; as the child increases in age the different parts of the body are disproportioned the head is often large the thorax small, the abdomen tumid, and the limbs unshapely, being either large and clumsy or disproportionately slender slender with large joints; The function most evidently disordered is the digestive; and indeed this marks the first deviation from health; irregularity of the bowels, being usually torpid sometimes the constipation alternating with diarrhoea, the evacuations are not of the natural appearance; the urinary excretions also often deviate from the healthy standard being often turbid,



especially when the bowels are constipated;
the cutaneous excretions are rarely normal,
the skin being either pale, soft and
flabby, or dry and harsh; in general
the insensible perspiration is defective,
although copious partial perspirations
are not uncommon particularly in the
feet where it often has a fetid
odour; the physical powers are generally
below the healthy standard; the circulation
feeble, as indicated by a weak pulse cold
extremities and inability to bear much
bodily fatigue; although, the intellectual
faculties, are often prematurely developed;
These are the most prominent marks
of the tubercular ~~excretion~~ although
when this diathesis is engrafted on
an otherwise healthy Constitution
these distinguishing traits are not
so clearly marked.

By the term tubercular cachexia is
understood that peculiar morbid



condition of the system which gives rise to the deposition of tuberculous deposits, on the application of certain exciting causes; this state may exist from birth or may be acquired at almost any period of life;

These deposits may occur in any organ of the body, though whenever found they are always on the free surface of an abnormal membrane, the only exception to this rule is the mucous membrane, and undoubtedly here the exception is more apparent than real; did the tubercular matter exist ready formed in the blood it would not require the intervention of an adventitious membrane for its elimination, but analysis thus far has failed to detect tubercular matter in the living blood. The ultimate elements of which it is composed it is true always exist in the blood, being Albumen, Fibrin, Gelatin and water these being



the essential constituents, with minute
traces of muriate of soda phosphate
and carbonate of lime; although the
elements of tubercle may exist in the blood
it ^{requires} a definite molecular arrangement
of the secreting organ to effect that
combination of elements constituting
tubercle; The mode of operation by
which the various healthy secreting
are effected is not understood Physiologists
have generally deemed it sufficient to
ascribe it to a vital action

The causes of tuberculous diseases like
those of most others, are referable to two
classes; the remote and the exciting; or
the causes which induce the tubercular
predisposition, and that which determines
the local deposit after the predisposition
is established; The first class operates
by modifying the whole system, the
other by determining in a system so
modified that particular action, of which

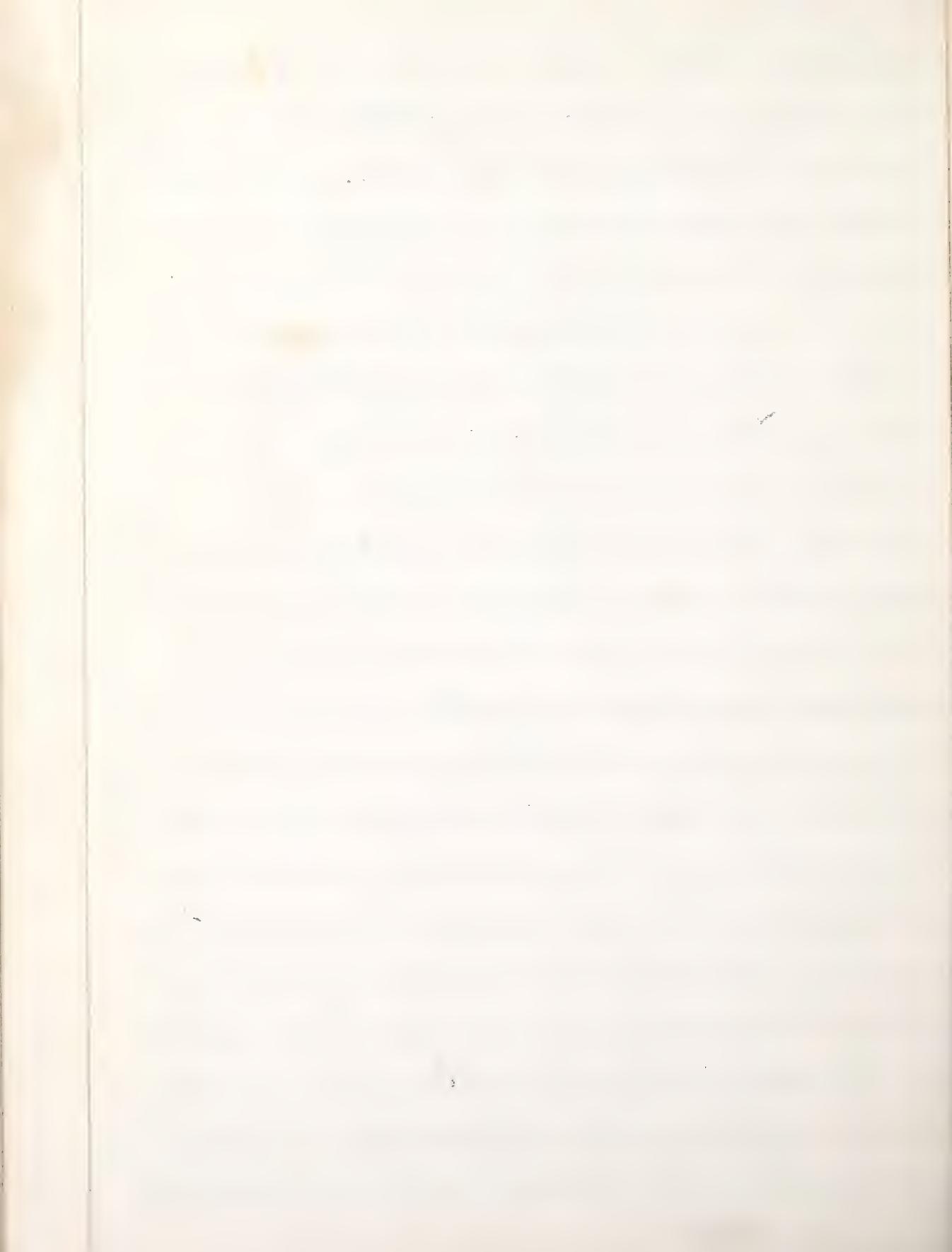


tuberculous matter is the product; under the head of ~~existing~~^{writing} causes of the disease, ~~which~~ ^{the} mentioned might be named. Improper diet, impure air, deficient exercise, improper clothing, or anything in fact which interferes with the nutrition of the body; when these causes have been in operation for an indefinite length of time the red globules of the blood become deficient in quantity; the albumen and fibrin from which all of the textures derive their nutriment are badly elaborated, the textures are badly nourished. The breathing and excreting organs become changed in structure; in this condition any very slight exciting cause, such as checked cutaneous secretion irritation congestion or inflammation, may produce the disease; and often without doubt the predisposing becomes the exciting cause of the disease; from irritated

nition the secreting surface may become so altered ~~in structure~~ as to secrete tuberculous matter without the intervention of any strictly speaking existing cause.

Treatment

The more constant and important element to be considered in the treatment of tubercular diseases is the diseased condition of the blood and this more demands the attention the more general and the more degraded are the depots; the first point to be attempted is the removal or counteraction of the several causes before named, as contributing to induce the diseased condition of the blood; thus a sufficient supply of food of nutritive quality, free access to pure dry air, and light while the warmth of the body particularly of the surface and extremities is carefully secured, the removal or counteraction



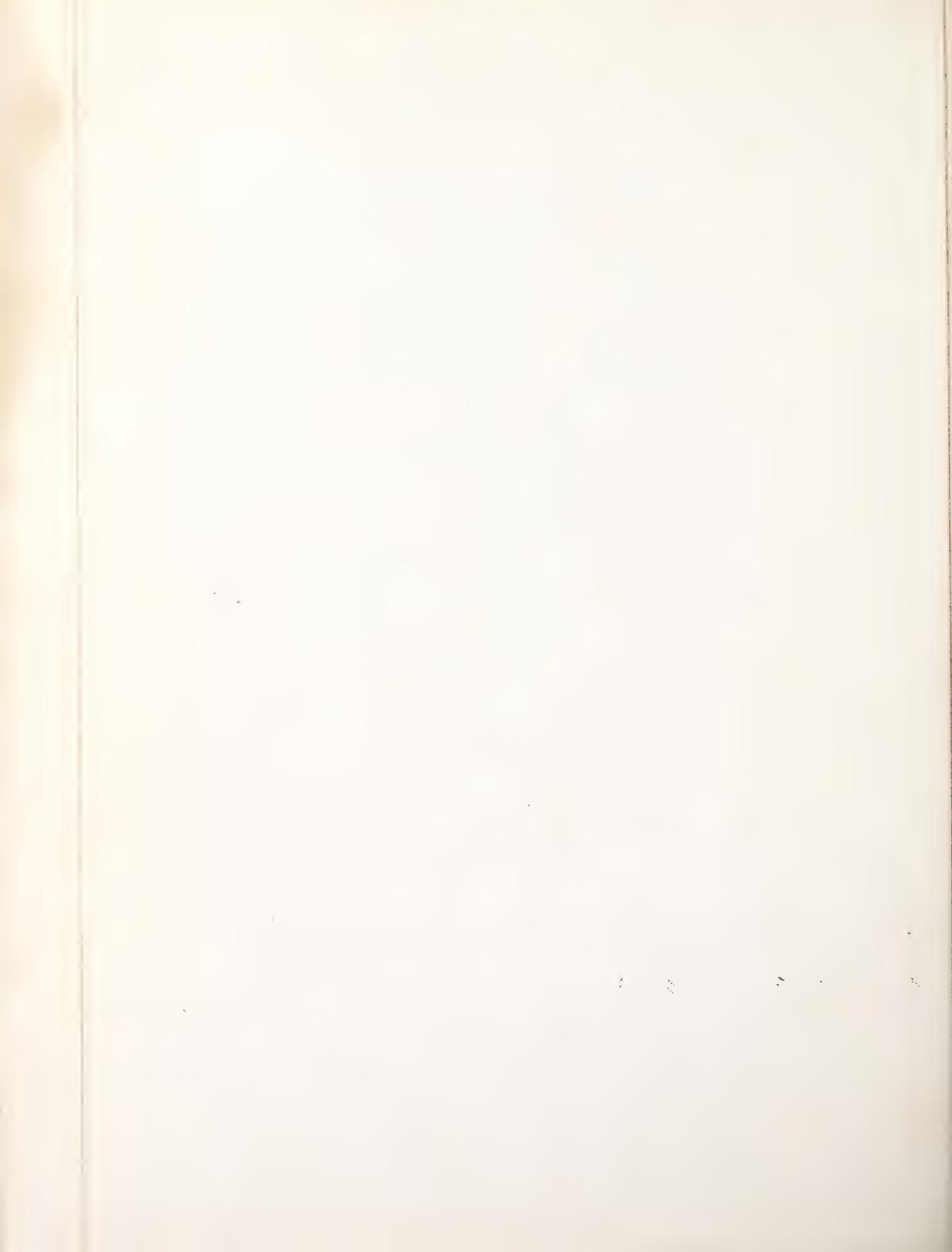
of diseases impairing digestion and excretion, and of depressing mental emotions; where excessive losses of blood or other evanescences have contributed to lower the plastic power of nutrition, a generous animal diet and tonics especially those containing iron in moderation; when the altered condition of the blood can be traced to an excessive quantity of ill developed fibrin accumulating after the cessation of growth at the termination of pregnancy, the amputation of a limb, or the sudden stoppage of an habitual discharge, means to eliminate the superfluous matter in the blood either by increasing the natural secretions, or by establishing an artificial drain by blisters, seators, suppurative counter irritants are distinctly indicated whilst Tonics and invigorating measures may be useful to raise the plasticity of the blood to a higher standard.



The foregoing measures may be considered rather as preventive than curative, but in so far as they may succeed in arresting the growth of deposits already formed and improving the nutritive function in general, they will favor the limitation of the deposits and their gradual absorption or quiescence in contrast to tubercular matter being a totally unorganized compound it is doubtful whether any remedy will materially promote its removal unless perhaps by the simultaneous destruction of the surrounding tissue; perhaps no article in the materia medica enjoys a more deservedly high reputation for its beneficial influence on the secretions than mercury yet from the low plasticity of the blood and the degraded condition of the secreting organs it is decidedly contraindicated in tubercular conditions; the alkalies and their carbonates, and Iodide of Potassium



have better claim to notice although their power to dissolve the tubercular deposits is very uncertain, the occasional subsidence of scrofulous tumors under their use is the best argument in their favor and they have this advantage that when judiciously administered they do not injure the blood or constitution, whether the alkalies or Soda even directly promote the solution or absorption of tuberculous matter is very doubtful but the signs of limited tubercles have in many instances vanished under their use and the patients have regained flesh color and strength; Goddeau of Yon and other preparations of Iron, have been found beneficial in cases of general anemia or general weakness without much local inflammation or fever, the same may be said of bark and quinine which are however very useful in reducing hectic fever when it assumes an intermittent form



during the anterior degeneration of
tubercular deposits there are generally
symptoms of increased weakness and
deterioration of the blood with rapid
emaciation and profuse night-sweats.
At this period the mineral acids are
useful particularly the nitric and nitro-
muriatic in conjunction with sasa-
parilla or stronger tonics if the stomach
will bear them; but after the tubercles
are formed, let the treatment ^{be what}
it may the physician must expect an
~~unfavorable~~ ^{triumphant} result; although tuberculous
patients will sometimes recover health
even under the most empirical treatment
either again and the majority will die
even under the most judicious
management.

M. C. H. Ladd.



XIV.

Dissertation
on
Medicine as a Science.

By
John Quincy Smith,
of Voluntown,
Candidate for the Degree of Doctor in Medicine.

Gentlemen

It becomes necessary
for me, in compliance with one of the re-
-gulations of this Institution, to present a
dissertation, upon some subject connected
with Medical science; And I am well aw-
-are, that something, of this kind, will not
only be expected, but absolutely required.
I think, however, it will not be expected
that the student of Medicine, in attendance
upon a rapid course of lectures, in an ins-
-titution like this, where the various sub-
-jects, which are daily urged upon his mi-
-nd; require his strict, and undivided attention;
and whose knowledge of Medical Science,
is wholly theoretical; will write anything
new, or Original; or at most, but little that
is so; or that I shall render myself, in the
slightest degree interesting, to the Honora-
ble Board.

In selecting a subject upon which
to make some remarks, I have experienced

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no little difficulty; for from an almost absolute want of personal experience in the investigation, and treatment of disease; and possessing a very imperfect knowledge, derived from the books; I consider myself inadequate to the task of treating, upon any, one disease, and doing the subject justice.

The most that I can do, is to perform the part of Compiler, if I should attempt to treat of any one disease. But, to avoid the office of Compiler as far as may be, and the trouble of making a selection, from the various diseases which have presented themselves to my mind, I propose to make a few, general remarks upon, Medicine & Science.

In taking a view of the multiform works of Nature, we find, that in every department, & however humble, there are fixed laws, and immutable principles, by which, each department is governed.

Philosophically considered; a knowledge

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of these general laws, fixed principles, and leading truths; or a collection of them, relating to any one subject or department, is denominated a Science. Thus for example Chemistry, is the science which has for its object: the discovery of the nature, and properties of all bodies, by analysis and synthesis; and the experienced chemist, is enabled to fulfill this object of his science, by his knowledge of the nature of the elementary bodies, and of the laws governing them in their union with each other; and of the reaction which is produced, when certain elementary bodies or compounds, are brought into a state of union.

So also Geometry is governed by laws equally exact and immutable; and it is the knowledge, of these principles which constitutes it a Science. The same may be said of Astronomy, Mathematics, Physiology and the other sciences.

It has however ever been the misfortune
of the Medical Profession (and probably ever will be), that

the laws governing the animal economy are
less easily defined, than those regulating inor-
ganic Matter. Although a profound intrica-
cy, with the intimate character of many of
the laws presiding over inorganic matter, yet,
from the general uniformity of their pheno-
mena, the physical Sciences, dependent upon
them, have been made to attain a compre-
hensive degree of exactness; while the principles
governing Organic Matter, or life, upon which
Medical Science is founded, have not hith-
erto yielded a like uniformity in their re-
sults.

Although many of the important
laws of life have been revealed, still, the
nature of life itself remains obscure and
incomprehensible.

While affinity, electricity and Galva-
nism, have each in a degree yielded their
phenomena to the Philosopher; the princi-
ple of life evades pursuit by its ever varying
and novel operations.

If the manifestations of the principles governing life, were as simple and as uniform in their results, and as easy of demonstration as those governing the physical sciences; the Physician might now have a host of principles as exact, as those claimed by the Chemist and Natural philosopher; But from the ever varying nature of the laws and principles of life, and the multiplex varieties presented by organic nature; it is hardly presumable that its relations will ever be thus accurately unfolded; or be susceptible of exact demonstration.

The principles upon which Medical Science is founded, may be defined or considered, as deductions from long observation and experience rather than from an intimate acquaintance with the laws presiding over the organic or animal economy.

It is not at all surprising then this being the position which Medicine occupies relative to the Sciences upon

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which it is founded; that, the principle
as by which it is guided, should be less
easily demonstrated, than those of the other
professions; nor that the partial fluctuations
to which it has been subject, in the different
eras of its history, should have occurred,
or that to the designing, should have taken
and these fluctuations into violent erup-
tions, or complete revolutions (which in fact,
have never taken place in the fundamental
principles of Medical Science. though they
may have done so in the reduction of these prin-
ciples to practice) is it surprising that,
the unblushing pretensions of Empiricism,
should mislead the publick, in a Science
which, least of all, is capable of comprehen-
sioning.

The Medical profession have frequent-
ly been stigmatized, by those possessing a li-
mited acquaintance with Medical Science,
as a profession, destitute of those standard
rules, by which, those receiving a Medical

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education, are enabled to regulate their practice, with all the uniformity, and precision of those entering into the other learned professions.

Perhaps it is unnecessary, to attempt the vindication of the Science from such unfounded charges; Yet it may be proper, in order to repel the notion of such a charge, to state, what no one intimately acquainted with Medical Science, will think of denying, that the Science is based upon principles, which if they are not as exact, are neverthe less received, recognised, and relied upon by learned physicians, no less than are those of the other Sciences,

It would seem, subject as the Science of Medicine is, to the innovations of the designing, and the attacks, of the empiric and Quack, that a necessity exists, for the profession generally to unite, in support of its recognised principles, in order to establish for itself, a character, by which, the Public may be

able to disseminate between, legitimate, Medicine and the baneful Systems of quack-medicine which are so prevalent, at this time in our Country.

If evidence were required to prove the establishment of Medicine as a Science and to prove that it has not been subject to the oscillations, by which, its traducers, labor to disparage it, and to which the other Sciences have, in a measure been subject; Reference may be had with advantage to its history.

In glancing at this history I shall not attempt to give a full and detailed account of the progress of Medicine, in this time, but to give as brief a sketch as may be, and answer the object I have in view, which is to trace its advancement to the station of a Science, and so much of its history since as will prove its title to that station.

In tracing the history of Medicine with regard to its origin, it is perhaps

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sufficient to remark, that, in proportion to the progress of civilization, and refinement, attempts would naturally be made, to alleviate the diseases and repair the injuries, to which the body is constantly subjected; or it may be said to have had its origin, coextensive with the origin of disease itself.

Thus the healing art was one of the first practised by man, and by continuing its history we find, that the science of Medicine was one of the earliest founded, and that it has withstood the revolutions of ages, almost without change except by gradual improvement. Greek history will also show, that a uniformity of principle, and general practice, have characterised the Medical profession, throughout the different ages from Hippocrates to the present day.

The art of Medicine as well as the other arts, and Sciences, was first cultivated in Egypt, and we find that it had so far advanced as to have become a

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distinct profession; but we do not learn to what extent that distinct appropriate-
ness was carried; whether the practice of Medicine was made the exclusive business of certain individuals, who were regularly instructed for that purpose; whether it was attached to some public functionary as the Priests; or whether persons in different situations applied themselves to the practice of Medicine from a real or supposed superiority in their skill or in their knowledge of the nature and manner of curing Disease. The probability is how-
ever that the Priests of the Egyptians were at the same time their Physicians; and this appear to have been the case among the Jews and Greeks.

The practice of Medicine as a distinct profession was confined to the Egyptians till its introduction into Greece by & Hieron-

There in the cradle of the Arts and Sciences it began to flourish and

received a new and powerful impulse,
and was cultivated as a Science by
Cleopius, the pupil of Thiron. He devoted
himself to its cultivation, and made it a
distinct object of pursuit.

From this time, to that of Hippo-
crates, there is very little in the history of
Medicine, that requires particular notice, ex-
cept, that, it continued to be cultivated, as a
Science. Neither are there many Names, that
require particular notice, or improvers of
Medical Science. The names most promi-
nent are those of, Pythagoras, Democritus,
and Heraclitus.

But when we arrive at this period, wh-
ch is truly an era in M. Science, its history
is identified, with that of, one of those geni-
uses, which appear but once in ages.

Hippocrates effected a complete
revolution in his profession, and intro-
duced a system, which, may be considered,
as having laid the foundation of all its

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future improvements; and it may be safely affirmed, that the Science is more indebted to his genius, and stability, than to that of any other single individual. He has justly been called the father of Physic.

Such was the power of his mind, and correctness of his observations, that, he was enabled to deduce principles from facts, and to apply them in his practice; and numerous are the principles which he brought forward, and advocated, which are even recognised at the present day:

For example, From observation, he was led by inductive reasoning, as strenuously, to adopt the antiphlogistic treatment, in gouty, and inflammatory Diseases, as the great body of the profession do; at the present time.

His exalted reputation appears to have established this rational mode of practice, among the Greeks of his own and

During ages. His writings with some few additions by his Roman successor — Celsus and Galen, became the standards of Medical literature, and the guides of practice for a period of more than fifteen hundred years.

During the dark ages, in which the other Sciences were almost extinguished, we find the Science of Medicine, as established by Hippocrates, and his principles, preserved and practiced by physicians of much reputation.

After the subversion of the Roman State, Medical Science less deteriorated than the other Sciences, passed into the hands of the Lombards; where the correct principles, established by Hippocrates, flourished; and in the hands of the distinguished Rhazes, and Avicenna, it became much improved.

It is unnecessary to trace the history of Medicine, through all of its different periods, down to the present time; in order to prove its establishment as a Science, upon

Principles sufficiently exact.

If, during the earlier periods of its history, it failed to attain that degree of exactness, of which it can now boast: it at least established for itself principles of practice which are now recognized at the present day.

It is true that Quackery and Empiricism have ever been the curse of the profession, and that they have in a degree beguiled the public mind; and just in proportion, to the prevalence of ignorance and superstition, and the ingenuity and influence of the promulgators of these systems.

Thus through the influence of the Epicurean school, the Atomic theory, for a time was a formidable rival to regular practice in Greece and Rome.

So the Chemical theory of the fifteenth century supported by Paracelsus and Van Helmont, lead the world astray for a season, and even some of the Medical profession.

They anticipated that its agents would effectually counteract disease, in whatever form it might appear, and even render the body immortal on Earth, But the reaction of a rational Science dissipates these groundless theories, as it will the absurd and unprovened theories of the present day.

The general prevalence and popularity of these absurd systems, strongly evince the existence of an element in the human mind, which leads it more readily to grasp at the mysterious and incomprehensible, than to embrace the truth as convinced by such principles as are susceptible of demonstration.

It need not be surprising then, that in a science like that of Medicine, where the material proceeds into the unknown, and the physical become blended with the more subtle and mysterious vital laws; the unprincipled should, instead of resorting to the labor requisite for the attainment of true Medical Science, intrude themselves within the

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menial, and render to the propensities
of the ignorant and superstitious, with the
view of obtaining for themselves, popular
fame, and fortune.

The profession have indeed still as they
did formerly, to lament the perversions
of the human mind, and to witness the
efforts of ignorance, and avarice, to usurp
the station, which is due to modesty, descent
and patient research; but such attempts
for the most part, obtain only temporary
success, and will after an ephemeral
celebrity, be consigned to their merited con-
tempt, together with their miserable orig-
inators.

But although illusion and error have
thus occasionally obscured, and are still and
continually obscuring the path of true Medical
Science; yet the progress of knowledge has
been and still is rapidly advancing.
Experiments well devised and patiently
conducted, have been performed in every

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Department of Physiological and Medical Science; Observations have been made with great minuteness and recorded with the greatest accuracy; the improvements made in the knowledge of Chemistry has enabled the profession to introduce important reforms into Pharmacy; while the discovery of new articles of the Materia Medica has given them additional and powerful means of opposing the progress of Disease.

Now in conclusion.—in reviewing the history of Medicine, in its modern existing Course through successive ages; its progress in comparison with that of the other Sciences, through the period when universities might overspread the literary world; when they with their boasted fixed laws, truth, and rational principles, were almost extinguished, while medical Science was preserved almost without deterioration. In the foundation

and preservation of principles, which at this period are recognized as guides to the profession, both in the investigation and treatment of disease.

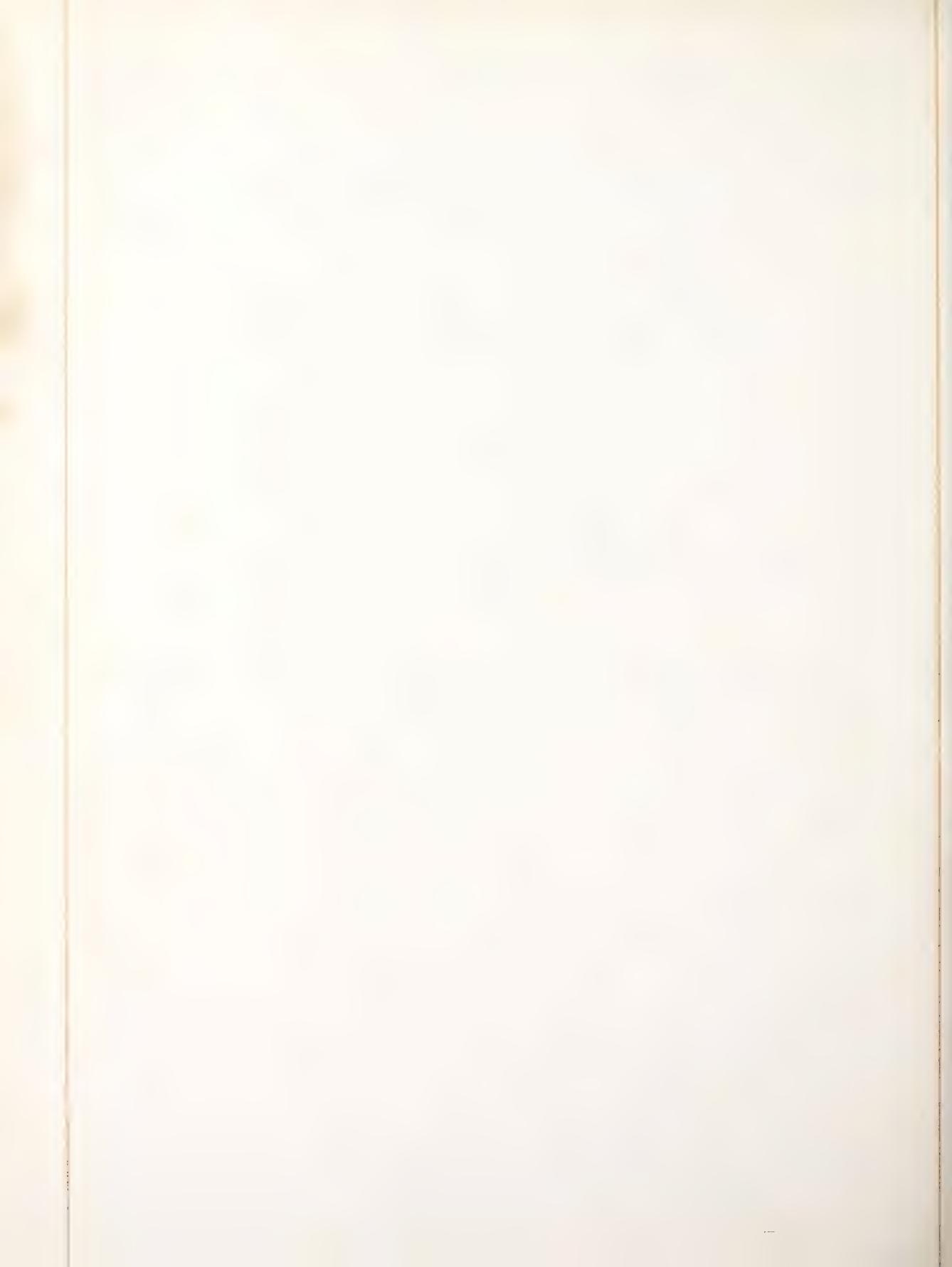
Also the general recognition of its merits by the intelligent of this period, as well as its recognitions and support by the most powerful minds of former times. Do these facts not afford conclusive evidence, that it is based upon that truth which it is the aim of the human mind to attain. Do they not afford ample evidence that it is entitled to the station of a Science and that of no mean order.

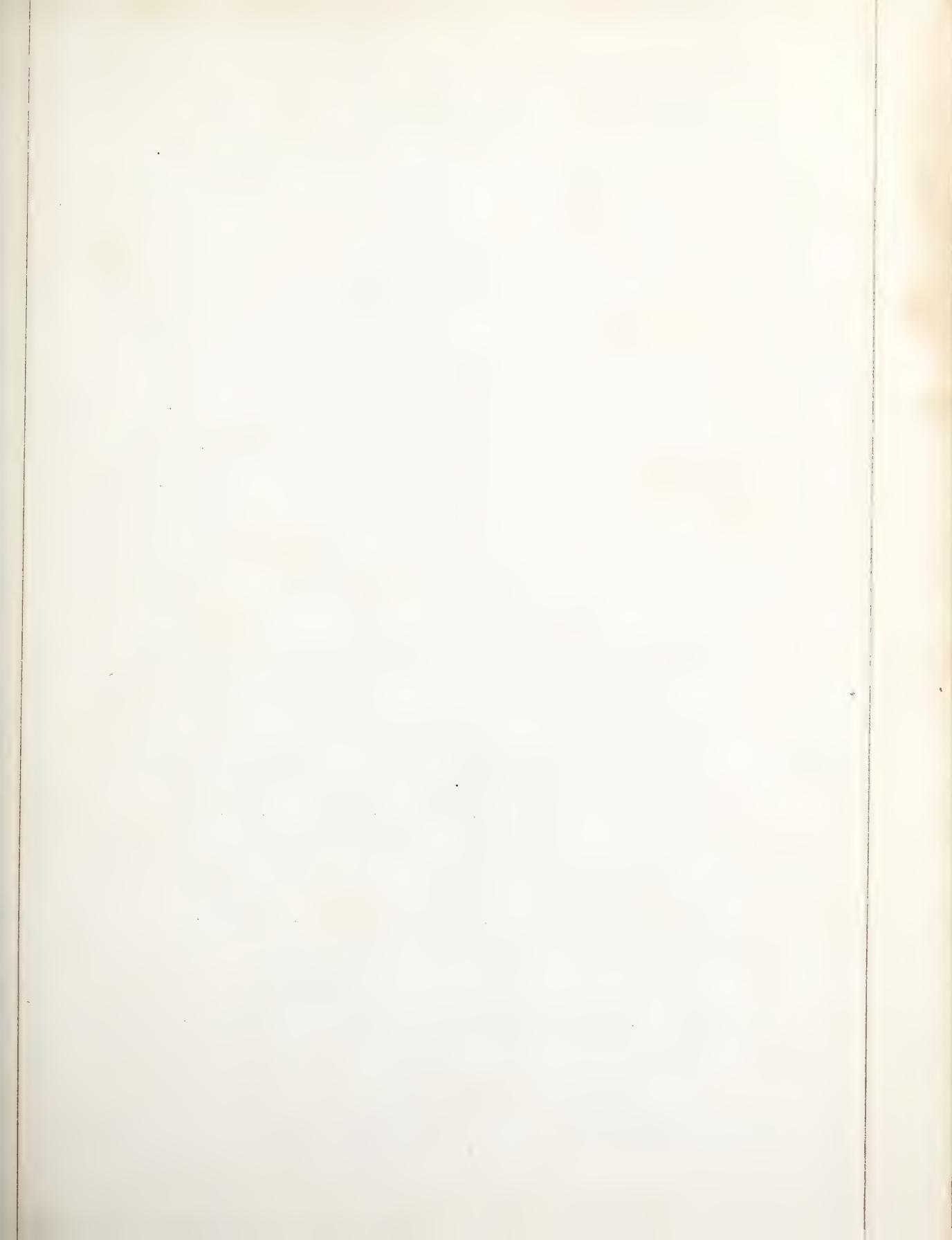
It is only requisite then, the intelligent generally being convinced of the merits of the Science as founded upon correct principles for the suppression of empirics and their delusive systems; that its principles should be promulgated in such a manner that the public in general may be able to comprehend and

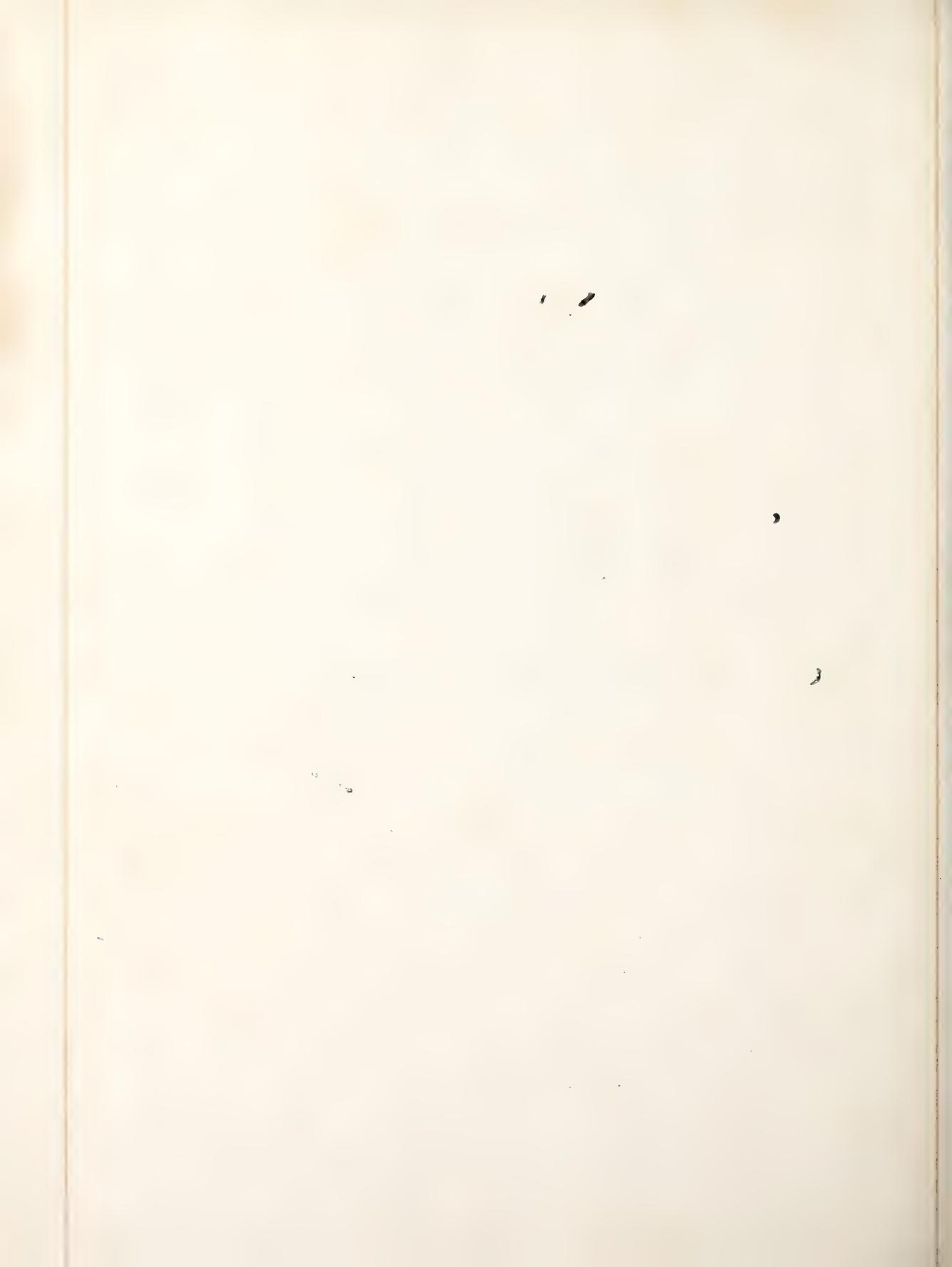
appreciate them. How this is to be ex-
pected, I am not qualified to say; neither
is it any part of my present purpose, nor
my province, to speak upon this subject.

{ New Haven May 14th/18-1 }

C. L. Smith







XV.

Dissertation
on
Necrosis.

By
Edward Brown Sprout,
of Natchitoches, Louisiana,
Candidate for the Degree of Doctor in Medicine,

Necrosis.

On looking into the human body for a portion which is not subjected to disease; we are unable to point out a single tissue or structure which is not liable to its ravages in some of its multifarious forms. The fibrous, the serous, the mucous and cellular tissues are all equally prone to its action. But to enter into a full description of all its forms, as it appears in the various parts of the system, would occupy, by far more time than is allotted to me at present; nor is it my intention to do so. We find that inflammation is almost always present, either as a symptom, cause or as a consequence of disease.

But inflammation, when present, is not always to be regarded as a disease, but frequently as a salutary process absolutely necessary for the cure of disease.

But we do not find that all parts of the human system, are alike subject to diseased action; but that one portion is more liable than another.

that we more frequently find the lungs and their appendages, suffering from disease, than the heart and its appendages. We often do we find that the soft parts, are more frequently attacked than the solids - And I believe it to be true, that in all cases where the lungs are attacked the surrounding soft parts are more or less affected as a consequence of the diseased state of the bone - But on the other hand, we do not find the bone implicated always when the soft parts around are originally diseased; though from various causes, either external or internal the bone may also be affected at the same time.

It seems that those organs which perform functions and offices important and necessary for the propagation and sustenance of life, are more rarely diseased - but sometimes the slightest deviation from a healthy action, in these organs, will derange the whole system, whereas those parts of less importance may deviate largely from a healthy state, and the

constitution be but little or not at all affected. Nature seems to have provided for the vital organs, more efficient means for the purpose of protecting them from the invasion of disease, than those which are of minor importance.

Take the osseous system, apart from mechanical injury, and it is more rarely diseased than almost any other part of the animal economy; of course this is subjected to a few exceptions. The age of a person and the peculiarities of constitution may render one individual more liable to affections of the bones than another - such as a sanguineous habit of body, or a syphilitic taint, which exert their influence upon this structure through the medium of the constitution. But generally, I believe the bones to be less frequently attacked than almost any other part of the body.

The bones are supplied with blood vessels, nerves and absorbents; thus in general circumstances resembling in texture, other

organized parts of the body - the greatest
difference being, that the bones contain
more phosphorus of lime, which gives to them
resiliency, strength and solidity, so essential to
their uses in the various parts of the skeleton.

Bones have the greatest power of
regeneration, than almost any other part
of the white system. Disease in its com-
mencement, proceeds and declines, in the
open structure, much more slowly of
character than when seated in the soft parts.
Dr. Samuel Cooper says, that no doubt those
facts are connected with the introduction
into the osseous tissue of a large inorganic
calcareous matter, and also, with the impo-
sition of nerves. Diseases of the bone do not
affect the general constitution so much as
when seated in other parts of the body -
But if the disease be extensive, with severe
inflammation of the soft parts, and of long
duration the constitution will suffer -
Bone like all other parts of the body, is

subject to inflammation - It may be acute or chronic, simple or specific. It may be produced in a single bone from external or local causes, or in several, from a predisposition of the Osseous system to inflammation. The periosteum and medullary membrane may be inflamed without the substance of the bone being implicated, but generally when the bone is the original seat of inflammation, it extends to the periosteum and medullary membrane.

The terminations of inflammation of the bony structure are the same as that in other parts of the body. It may terminate in caries, which corresponds to ulceration in the soft parts; or it may terminate in necrosis, which is the same as mortification of the soft parts. But necrosis is caused by many other circumstances, which will be noticed when we speak of the causes of the disease. Ulcer and caries may be the effect of previous inflammation, or they may come on without any symptoms

of a recent inflammation.

Diseases of the bone grow after even a slow and tedious course. In fact this class of disease is the most incurable and baneful affection, and not altogether without danger to the patient. Always baneful but not always dangerous. There is scarcely no disease which it is ever beyond the reach of medicine at this stage. In chronic inflammation of bones the swelling comes on slowly, and the hardness is almost imperceptible. The swelling is sometimes caused by what is called,

interstitial depositions, or by the deposition of a large quantity of phosphate of lime. Sometimes the phosphate of lime is taken up by absorption, so that as the lime becomes enlarged, it also becomes porous, and consequently lighter than natural.

It is the effects produced in bones by the action of inflammation, depends upon the extent and cause of the morbid action. But for me at present, to go through with all this, with an accurate description, would wear the

patience of this General Board. The pain which is felt, also depends upon the extent of the inflammation, or erosion, also upon the violence of the attack. In cases where the disease is brought on by the effects of syphilis, the pain is the greatest at night.

When the symptoms are violent from the beginning, it becomes, the disease is more rapid in its progress, and ends sooner than when it begins in a milder form. Thus, when a man goes to bed at night well, and is attacked with a deep seated pain in the leg, in the middle of the night. The pain followed in a short time, by swelling of the part, accompanied with severe inflammation of the skin, an abscess soon forms, and the whole course of the disease is completed in the space of six weeks or two months. But numerous months and even years pass away, and the disease continues, with a continual discharge of pus from the diseased part, undermining the constitution, producing irritative fever, followed

by hectic, and all its consequences. Morbus
is as common, perhaps more so, than any other
disease of the bones. Scorbut is the death of
a bone. It may be a part, or it may be the death
of the whole bone. But rare b'k we see the death
of a bone theorized - but cases do occur, where
the whole length of a bone is found dead.
It may not be the whole, the b'g of the bone is
it may be only the external portion.

It may attack any and all of the bones,
in the body, at any period of life, and in
either of the sex. Those that are more frequently
attacked, are the very situational bones, and
then of the hardest texture - the spongy bones
being more frequently affected with caries.

Scorbut is found often in the tibia and fibula
next, the femur and lower jaw. Sometimes
the scapula and the bones of the head are
affected. In children and young persons the
long bones are often affected with morbus.
Rare at any other period of life. In persons
from thirty to thirty-five years of age, the flat

bones seem more prone to Necrosis. I am unable to account for this.

Symptoms. Necrosis comes on with a deep seated pain, of more or less severity, followed in a short time by enlargement, with inflammation of the soft parts. And if the inflammation be extensive and severe, there will be constitutional disturbance. An abscess forms and matter is collected and it discharged, and perhaps, after a time the dead bone is also discharged. Such the discharge of the sequestrum depends upon circumstances, and often requires a considerable time for this to be accomplished.

Necrosis may be divided into three different stages, according to the condition of the bone. The first stage is the former of the disease, characterised by inflammation of an acute nature. In the second, the sequestrum is produced, but not detached from the sound bones. In the third stage, the sequestrum is not only formed but loose. The sequestrum is now to be considered as an extraneous substance, which, as long as

retained in the limb, will keep up irritation and suppuration.

In portion of the bone loses its vitality and a new bone is formed around this dead bone, which in turn encloses completely surrounding it. In a varied length of time the part is dissolved and thrown out in several small pieces of a more or less circular form. Through these openings there appears a porous growth, which is pathognomonic of the disease in point.

When the sequestrum is loosened, it may be discharged in a finer or coarser time, or it may remain during the life time of the patient. Some time after the formation of the openings just mentioned, there are weathering and separation of the dead bone particles, which when thus detached may be discharged. As soon as the matter is discharged the sufferings of the patient are greatly diminished. Until the sequestrum now be discharged, the disease would disappear. The new bone is generally formed before the sequestrum

is detached from the living parts of the bone, so that the whole course of the disease may be completed without the loss of the limb. The symptoms of this disease vary according to the cause, extent and constitution of the individual.

The causes of necrosis are external and internal. The external causes are injuries, contusions, and sometimes the application of caustics to an unhealthy ulcer upon the skin. The tibia is more frequently attacked by this disease perhaps from its being less covered by soft parts, and being more liable to bruises than most bones of the body. The internal causes are such as exert their influence upon the diseased part, through the medium of the constitution; such as a scrophulous predisposition of body, lues venerea, and the debilitating effects of malignant diseases such as small pox, typhus fever, and measles. In just any thing that offends the periosteum, the substance of the bone and the medullary membrane is took a manner as to engraft the

fracture, or loss of the bone, will cause its death. The injurious ion of mercury in the form of fribilitis, is often the cause of Necrosis. When it arises from this cause it generally attacks the lower jaw, usually causing the destruction of the whole of the bone. When caused by the effects of syphilis, the pain is greater at night when the patient is warm in bed.

Necrosis is sometimes the consequence of inflammation, though it sometimes makes its appearance without any symptom of previous inflammation and again it arises from no assignable cause whatever. The causes of Necrosis may also be divided into predisposing and exciting causes. The predisposing causes being constitutional peculiarities and cold and mechanical injuries being the exciting causes.

Diagnosis. Necrosis has been confounded with Cancer, though the two diseases are as different and distinct as ulceration and mortification of the soft parts. Cancer is one of the

consequences of inflammation of the bone, some of whose textures are absorbed, so that a chasm is formed without the loss of vitality, while in necrosis another condition of the bone is found, being the complete or partial death of the bone, followed by the formation of a new one, or by a more or less repair of the part destroyed. Caries mostly affects the spongy portion of bones, while necrosis more commonly attacks those that are of a solid and compact texture, containing more of phosphate of lime. This is so much the case, that the same cause that excited caries of the spongy bones, would if its influence were exerted upon the more solid parts of the skeleton, excite necrosis. But both of these diseases may be present at the same time, but rarely do we find such a combination. There is a difference in the discharge from the two diseases - which of itself is almost diagnostic of the disease. That of necrosis being of a

health character and that of caries of a joint and unhealthy nature, making that the rarer form when introduced into the bones of the lower end of the femur has been mistaken, for white swelling of the bone sick. By passing the hand along the bone from the condyles upwards, and we find that the bone is thickened about a hand's breadth, up the bone. The disease is chronic. Sometimes there is an abscess formed between the bone and the muscles just above the condyles. The swelling is often firm and insidious to the touch. It differs from common exostosis in that the new bone is almost always formed before the old bone separates from the living part of the bone; it resembles it, in that there is always a pulpy membrane between the sound dead bones.

The prognosis of this disease depends upon the bone that is necrosed and the severity of the symptoms that follow.

If the articular portions of the bone are destroyed or involved in the mischief of seborrhea, with the shaft of the bone, at the same time; the prognosis is unfavourable, and nothing short of amputation of the limb, will save the life of the patient.

This disease is so uncertain as to the extent that the bone is diseased and as to its duration, that it is no easy matter to form a correct prognosis. Especially in the early stage of the disease - If the sequestrum has been discharged, we may promise our patient a prospect of recovery - But until this is accomplished there is no probability of recovery. Its presence is a source of irritation and suppuration, and the constitution will suffer greatly from the continuation of the discharge, and the patient be destroyed -

Treatment - The treatment must vary according to the stage of the disease and the severity of the case - before that in

the first stage, when the sequestrum is not yet formed - the disease involves a large portion of the bone accompanied with violent and extreme inflammation of the soft parts. All that can be done then, is to use our endeavors to check the inflammation. There as in all other inflammatory diseases, the anti-phlegmatic treatment is the best means of combating the disease. If the patient be of a plethoraic constitution and the fever is high, with a full thump and tense pulse we may bleed from the arm, with local depletion, by means of leeches and cupping, fomentations and poultices. Saline fomentations and diaaphoretics. From the nature of the disease, namely, from the circumstance of its unavoidable and sudden complication, with a portion of the bone deprived of vitality, keeping up irritation as an extraneous substance, all that can be done is to lessen the inflammation and alleviate the sufferings of the patient. The sequestrum will be formed,

the removal of which either by a natural process or by the influence of the surgeon, is absolutely necessary for a favorable termination.

As soon as matter is known to be present, which can be distinguished by the fact of fluctuation, a free opening is to be made, so that an early discharge of pus may be produced. In the second stage, the dead bone is formed, but still attached to the living bones. In this stage, we are obliged to wait for the natural separation of the sequestrum; as there is no medicine yet discovered that will hasten this process.

It requires a greater or less length of time - months and sometimes years, for the old bone to become separate and loose; for this process is particularly slow. In young persons and children the separation is quicker than in a more advanced age.

The third stage. The sequestrum is loose and regarded as a foreign body. The indication is to remove it and if this is not accomplished

by the efforts of nature, it must be done by
the power of the constitution be healthy,
the discharge diminishing in quantity and
the patient are disposed to heat, we much
wait for the natural discharge of the tumor.
But if the constitution is suffering from
debility and the discharge of pus occurs,
and the sequestrum known to be large,
then it becomes an object to remove it
by an operation, which consists in cutting
through the soft parts and cutting away
as much of the new bone, which encloses the
dead portion, as will admit of its re-
moval. The treatment varies in certain
cases when a portion of the tibia becomes
dead and the skin necrotic, and the dead
bone is exposed, and turns black, and
undergoes no further change for some time,
we may suspect a tubercular state of the
constitution and Mercury is indicated.
But if the necrosis be caused by the injudicious
use of mercury the Nodide of Potassium is

used with advantage - If the constitution
of the patient becomes weakened from the
continued discharge. Sust. should have
such as Barks with wine &c. sometimes
all our plans of treatment fail us, and
the patient is gradually sinking under
hectic symptoms, characterised by the evening
exacerbations, night sweats, and the circumscribed
redness of the cheek called the hectic flush.
here amputation becomes necessary for the
safety of the patient. This operation should
not be performed during the irritative stage
of the fever, but on the appearance of
the hectic symptoms. Usually if the
patient has sufficient strength, after
operation the stump of the limb will
heal kindly and cicerosis terminated
with the loss of the limb. We should
always try to effect a cure without the
loss of the limb if possible. But when
this cannot be done it is our duty to
resort to the operation of amputation.

Sometimes the disease is easily cured,
when the general constitution is healthy,
but if there be an unhealthy condition
of the constitution, sometimes all our
remedial efforts are ineffectual and the patient
gradually sinks into another state of existence.

This the 19th day of Edward B. Frost
of January 1848. At Vicksburg
Jan





XVI.

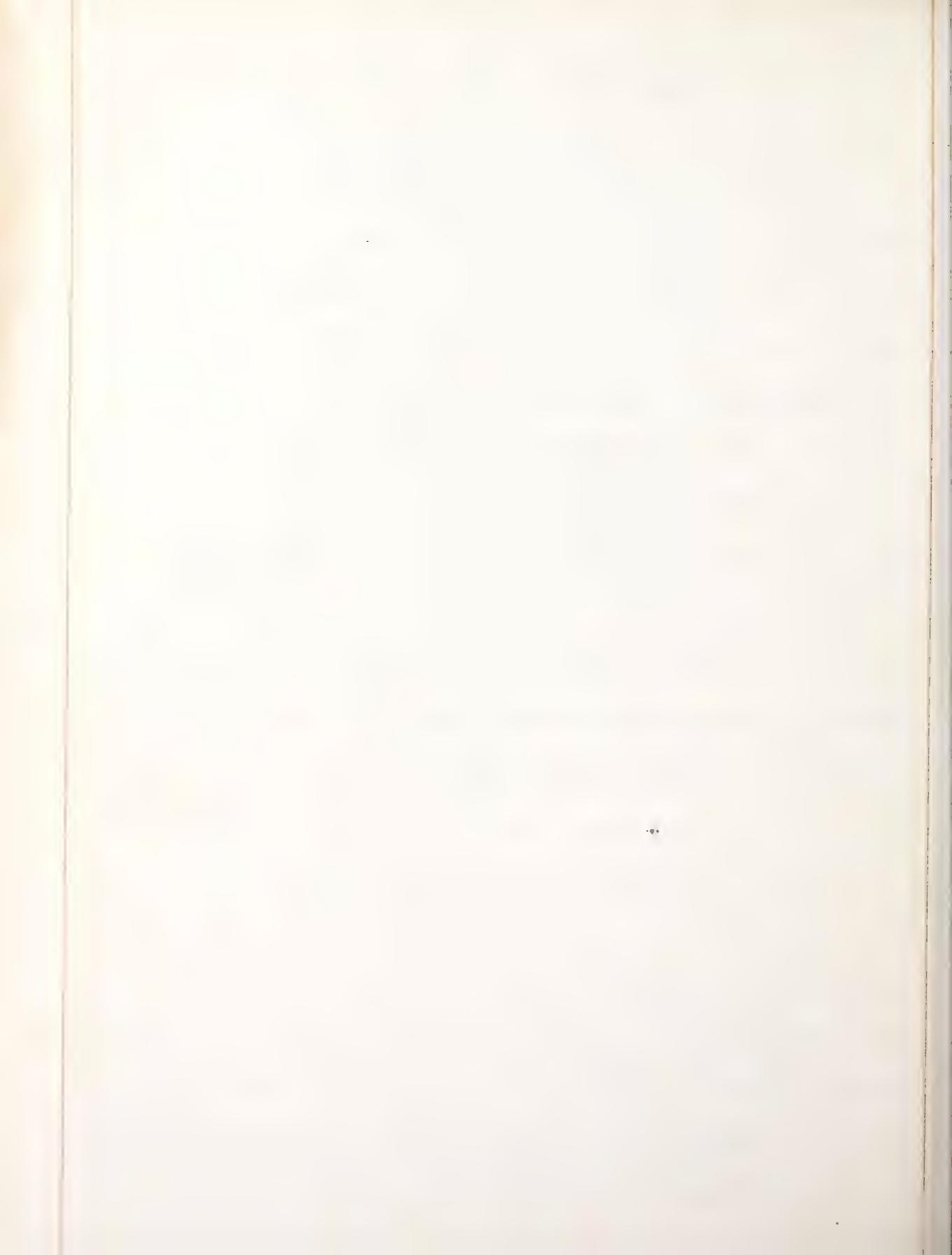
Dissertation
on
Cynanche Trachealis.

By
Granville Taylor,
of Laubury,
Candidate for a Licence.



Cynanche Trachealis.

The disease known by the name of Cynanche Trachealis - Tracheitis or "Croup" is an inflammation of the mucous membranes of the trachea or wind-pipe. Sometimes the inflammation extends into the bronchi, or into the larynx or into both according to its extent. It is a remarkable disease from the fact that it shows an even inflammation that does not usually belong to that process when it affects mucous tissues. It is also a disease peculiar to that period of life which occurs between the age of weaning and that of puberty, rarely affecting children during the first year of infancy, and sometimes attacking persons in more advanced periods of life. It is more commonly seen during the second and third year, owing perhaps to the change of habit that must necessarily occur upon the weaning of the child. From this period on, the number of children attacked decreases in number, which is one characteristic of the disease.



Croup is generally sudden in its attack, violent and rapid in its progress, and unless met by prompt and decided treatment in the beginning, is generally fatal in its results. Sometimes the symptoms resemble those of a common catarrh, such as sneezing, coughing, &c., accompanied with hoarseness. This last symptom does not usually accompany the common catarrh in children, and should therefore be looked upon as an attendant on this disease alone. With these symptoms, the child is usually feverish & fretful, and does not sleep well. More commonly, however, it is announced without any pulmonary symptoms, by a peculiar harsh, dry, and ringing cough, difficulty of breathing, and sonorous inspiration. This peculiar crowing sound that follows both inspiration and expiration is often sufficient to identify the disease. At the same time, there is no difficulty in swallowing, there is inflammatory fever, a flushed face, a hot skin, a frequent, hard pulse, and thirst. It is by taking the symptoms collectively that we judge of the disease, for some



of these may be present and others absent; and it has been said, that the remarkable sound which marks the disease may take place without croup being present. At times, it attacks patients very suddenly; perhaps they retire as well as usual, and awake with all the violent symptoms of the disease. I believe that whatever previous symptoms may occur, the peculiar symptoms come on in the night. But I will pass this over, and speak more of the symptoms when I come to the treatment of the disease.

Croup is often fatal within twenty four hours, but more commonly it is extended to three or four days, and sometimes to a week or more. It has been stated by writers that this disease is peculiar to certain localities, such as low and damp places, and on the sea coast, owing to the fact, that it is often occasioned by a changeable state of the atmosphere. But it has been seen in all localities, especially in more northern climates, and in the temperate regions. It occurs more common in the approach of winter, and in the spring. Sometimes it follows other disas-



es, such as measles, scarlet fever, &c. For this reason, it has been divided into two forms, Idiopathic, and Symptomatic. It is called idiopathic, when it is the primary disease, and symptomatic when it follows others. In which ever form it may appear, I can find as there is any difference in the treatment, or in the symptoms, otherwise than that there is more danger in the consequences. Some writers have considered it as contagious, but at the present day it is generally thought not to be so. If this is a contagious disease, why should it be so more than any other inflammation of a simple membrane of the body?

Children, who have had this disease, are, like those who have been attacked with bronchitis, & many other inflammatory diseases, liable to a return, and repeated attacks; therefore, they should be carefully watched, and prevented from exposure to cold and damp air especially after warm days, followed by cold and damp nights in the Spring or Fall. As this is a disease of infancy, the sensibility of the patient to a return of the com-



-, pain is happily diminished. Though there is great danger following a second attack, it is not as great as at first, though there are exceptions to this fact.

In most cases of croup, there is a concrete membrane-like substance, which is so peculiar to it, that it is called the membrane of Croup. In some cases of recovery, this membrane has been thrown up nearly entire, at other times coughed up in flat or tubular fragments. In fatal cases, it is often found in close contact with the mucous membranes, at other times detached from it so that it might have been coughed up if sufficient muscular energy had remained. Probably, it is not owing to this formation alone that causes the death of the child, but in part to the spasmodic irritability of the Glottis which accompanies the disease, and which is supposed to cause this peculiar crowing sound.

I shall ^{not} enter into a discussion of the various reasons which are given by different writers, for the formation of this membrane which is always



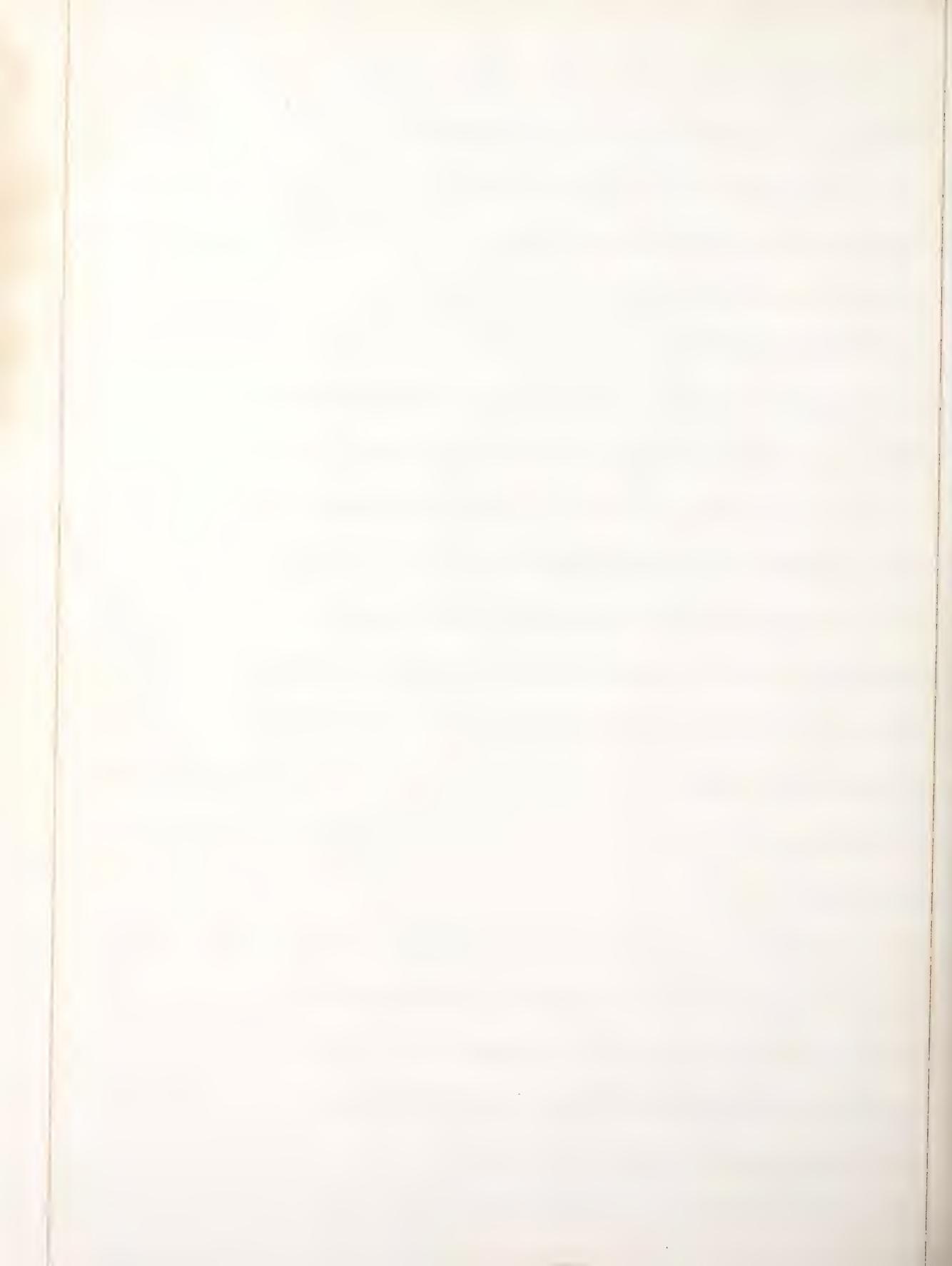
found on post mortem examinations, or else very extensive inflammation. Neither will I give the hypotheses that have been woven to account for this product of inflammation in the head of infants. The formation of this membrane is very rapid and even its reproduction is so, when removed either by operation or by coughing, sometimes forming in six or seven hours. The presence of this membrane, gives a plausible explanation of one of the symptoms observed, that is, the tendency to throw the head back. In this position, the tube of the membrane is still open, when, if the head is thrown forwards, it brings the sides closer together and thus obstructs the passage to the lungs. These children with this disease generally exhibit a high degree of congestion of the lungs, and of the vessels of brain.

Croup always excites alarm in the friends and parents, of the child, from the fact that the prognosis is always doubtful. It has been said that in former times, it was attended with greater mortality than at the present time, owing to the more light having been thrown on the treat-



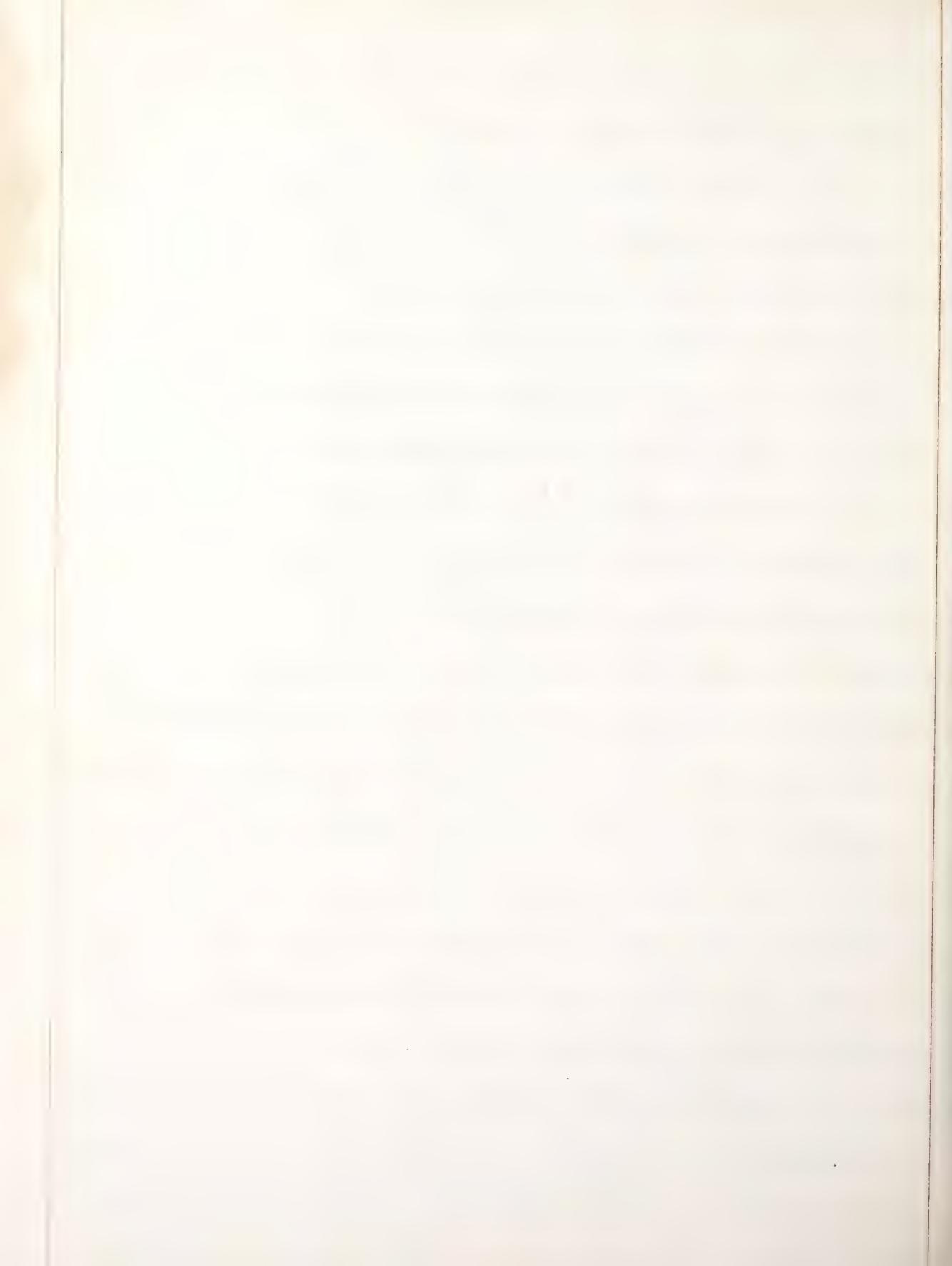
ment of the disease. The probable issue of the disease must be judged of by the apparent symptoms and progress. The prognosis is chiefly to be collected from the general condition of the child, as we have no means of knowing the extent of inflammation on which the danger depends, except from these external indications. If the distress of breathing seems to remit, and free expectoration comes on while the patient has strength left, we may yet hope. On the contrary, when the violent symptoms continue unchecked, the result will be mortaality. Like all other rapid and highly dangerous diseases, the mortality will differ according as it is detected early and met by vigorous and energetic treatment, — or otherwise.

In treating of this disease, I shall divide it into three stages, because the different periods of the disease require different treatment, as they are characterized by different symptoms, & as being more or less unimportant, as either one or the other of these stages are present, as well as afford



ing a better arrangement in the modification of the disease itself.

The first stage, is called the morning, the second is called the initial stage, and the third congested. In the first stage there is usually a severe, dry, and hoarse cough, the pulse regular, and small, tongue not colored, face natural. Sometimes the pulse is trembling, and often the patient is chilly. The paroxysms of coughing are from 5 minutes, to half an hour. There is some difference of opinion among practitioners as to the treatment in this stage, but in general they recommend and employ emetics, not only to empty the contents of the stomach, but also for the other effects which emetics produce upon the body. They relax the system, reduce the action of the heart, determine the fluids to the skin, which is the antagonism of the mucous surfaces. Producing at the same time, a copious secretion from the fæces, which unloads the congested state of the glottis. The emetic usually employed is Tartar of Antimony. Three or four grains are dissolved in water



and a tea-spoonful is given every fifteen minutes until free vomiting is produced. As this is a rapid disease, we must not be governed by quantity but by the effect produced. Constant means a should be kept up to prevent the return while fomentations and the warm bath should be used in connection. Other emetics, sanguinaria, Seneca, &c, have been used in connection, or alone. Some have recommended bloodletting, but in most cases emetics in this stage have generally answered all the indications, and usually prove successful.

Calomel has been given to affect the secreting system, which is known by the alvine discharges, when they resemble chipped spinach. If these remedies have, ^{been used} without success, the child soon passes into the second, or inflammatory stage.

Perhaps from inefficient family treatment, or from ignorance of danger, the physician is not called until this stage is present, which is known by the hot skin, flushed face, pulse tense, and sometimes full, respiration is difficult, tongue covered with a



white fur, and rarely any interval between the paroxysms of coughing. When it arrives at this stage, local and general bloodletting is adopted at once, to remove the local congestion, and to assist the actions of Emetics and cathartics. These are also assisted by inhaling the steam of warm water, and by the warm bath. After bleeding, the emetics are given for the same purpose as before, as is also the salve, especially if the disease assumes a tertious form. Epis-
haetics are applied to the throat sometimes.

If the disease continues unchecked, the third, and most generally a fatal stage comes on. The voice is lost, there is lividity of the lips and face, and the child gradually sinks, or is lost in a violent paroxysm.

In this stage, bleeding is not generally indicated, as well as those things that relax the system because they diminish the secretions, as well as the power of ejecting the matter excreted. Stimulants, and such things as support the system should be used. But as

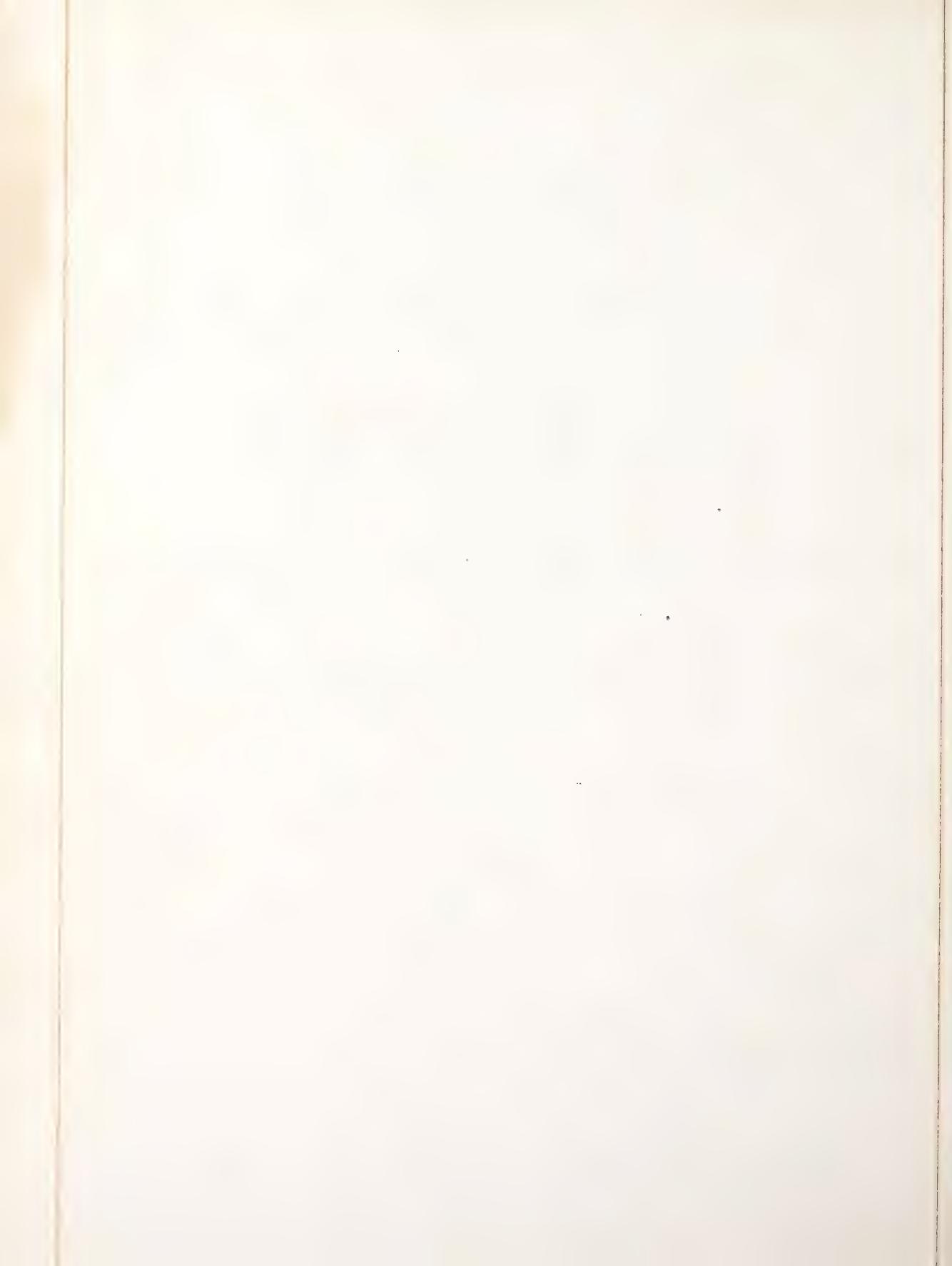


a general thing they are of no avail. Bronchostomy has been performed, but as a general thing without success. It might be resorted to with a bare possibility of success, when every other remedy has failed.

There is a condensed report, given in Woods quarterly retrospect, of two cases of Croup which was treated by Dr. Blackman of New York, by a solution of nitrate of silver. In the first case, in which the symptoms were well marked, emetics had been given without producing any benefit from the vomiting, since Calomel had produced copious evacuations from the bowels. The symptoms of asphyxiation or suffocation continuing to increase in a alarming manner, the larynx was cauterized by a sol. nit. Arg. $\frac{3}{4}$ to $\frac{3}{4}$ of water. A thick tenacious substance was brought away with the sponge, and a free respiration followed. In ten minutes the operation was completed with



the same effects, which seemed to arrest the disease. Five hours and a half after, all the symptoms the symptoms had increased. The sponge was again used, and after the subsequent vomiting the patient fell asleep, requiring no further treatment. In the second case, it "was determined that the remedy used last in the first case, should be the first in this, and made two applications of the sponge with the same strength as before employed. Some tough phlegm came away on the sponge, and no vomiting followed which allowed the patient so that he fell asleep." There are two cases, in which this disease has been treated successfully by this remedy. Future experience alone can testify, as to its real value, but from these cases it bids fair to become a valuable article in the treatment of this disease. As Crook is a specific inflammation of the parts affected, this remedy by producing



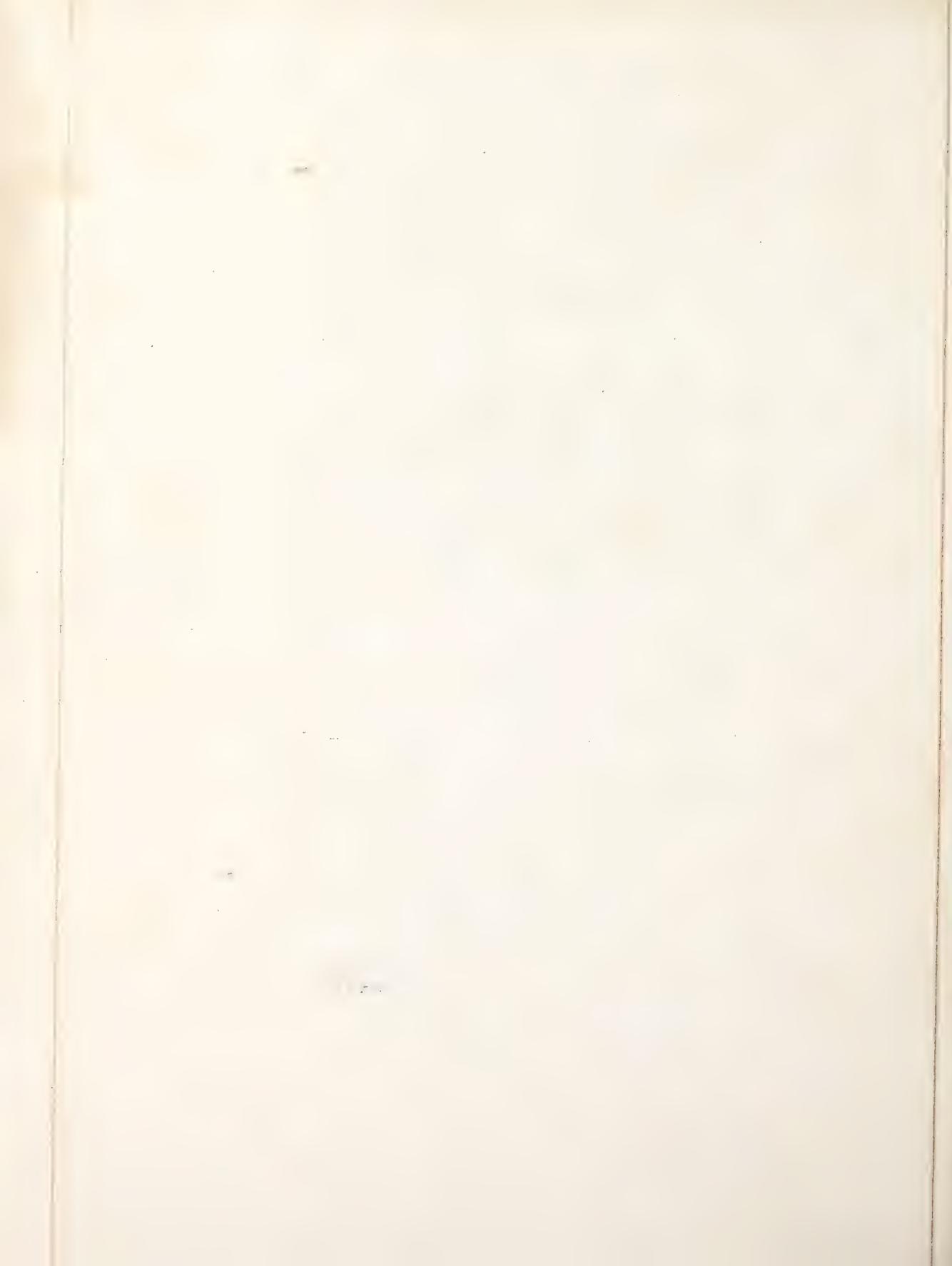
ing a different action more allied to common inflammation, may check the specific action and in this way overcome the disease.

There is a disease called "hypnotic asthmatic croup," or "Hysterical Croup," which has some resemblance to croup, and with which it is often confounded. But from which it is manifestly different in many of its symptoms. I will not occupy time in pointing out this difference as croup, & croup etc., is the subject on which I have written.

Granville Taylor.

C. R. D.

New Haven, Jan. 17. '48.



XVII.

Dissertation
on
Civil and Military Surgery.

By
Sigemund Waterman,
of Germany, Europe.
Candidate for the Degree of Doctor in Medicine.

Civil & Military Surgery Practice.

Gentlemen!

The intelligent surgeon perusing the stern code of his profession, dwells with sad emotion on the amount of mutilation, which he is called upon so often, to inflict, in order to relieve the sufferings of his fellow man. He will glance with an anxious eye, over the long list of bloody experiments, and frequent failures, summed up in the many valuable works of surgical writers. A question here arises of the greatest importance viz: "Are the laws & principles laid down by military surgeons, binding on the practitioner in private life?" The answer to this inquiry, I have made the subject of the present Dissertation. To me it seems, that there is something in-

in the very nature of military practice, that ought if possible to be banished from civil practice. The military surgeon takes his leave from iron necessity. The gloomy or existing spectacle in the hour of a desperate conflict, between contending armies - the field reeking and strewing with the gore of slaughtered thousands is not in my opinion the proper school, which should legislate for our divine profession? Whatever be the experience at the command of the military surgeon's however great the number of cases, which come under his eye and treatment; whatever opportunities he may have, to perfect his manual skill and extend his knowledge by observation, the principles laid down by him should be received with due caution. For where thousands fall a sacrifice to the single sweep of a well directed battery, or where the heartrending cries of wounded legions claim immediate attention, the military surgeon will often consider himself justified in establishing a practice, which would altogether be inadmissible in private life. And how is military practice after a fought battle? Is it less stern and merciless, in temporary hospitals, void of many of the conveniences and resources of the civil hospitals, accumulate the broken remains of the noble forms that sought the strife, in the gloom

of manhood. Groans & expressions of suffering in all manner of stages rent the skies, humanity in its misery and despair appeal to the surgeon for help. Is it to be supposed that he will investigate and follow the genial laws of the healing art? Is not despatch the leading principle to be continually kept in view, under such peculiar & urgent circumstances? Is not this state of things not calculated to ^{urge} upon the surgeon a practice, dictated by necessity, of too revolting a character to be admitted in private life? The military surgeon has to contend with the manifold predispositions & consequences to disease in military life which will break forth in a formidable train with their morbid phenomena, at the receipt of a wound, or the accession of a malady, calculated to exhaust the system and to prostrate the powers of regenerative nature? And although it is true these morbid phenomena may counteract at times our efforts in private life & practice, yet the instances in which we experience these difficulties are comparatively rare; the ravages of erysipelas are generally milder in their type, hospital gangrene & hospital fever although well known in private practice, have a limited sphere only & may be

easily controlled. Not so in the field; far from the fostering care of kind relations & friends - no consoling voice near to lull us, keep the tormenting agonies of body & mind, denounced by humanity in its many-fold stages of disease, the well tried amanuenses of the Conflict. Struggling with approaching death, an atmosphere charged with the offensive effluvia arising from surfaces, undergoing the processes of suppuration, ulceration & mortification, paralyse the efforts of nature, and extinguish ^{the} specially the vital powers.

Such is a faithfull representation of the practice in the field, such the emergency the military surgeon is called upon to meet. Is it to be wondered then, that his practice by reason of its stern principles should be found inadmissible in private life, where all or most of these disadvantages do not exist? Is it to be wondered at, that the civil surgeon longeth for a code of his own, whose laws should differ from the military code, as divine peace differs from bloody war? Such Gentlemen, are the considerations which will strike every surgeon, about to take upon himself the responsibilities of his profession. It is not misplaced softness of fibre, or nerve; for this would unfit

the man for his profession, but philanthropy in its purest light, claiming from us to mitigate the sufferings of our fellow beings if possible, & if consistent with their safety.

Guided by these gentle feelings I have examined some surgical laws, which will allow of some modification, and among the endless material offering itself to our inquiry we will take up "Amputation." The laws in military practice with regard to this question are the following.

I. If amputation is necessary at all, it has been^y is the practice to amputate on the field: see Hunter on Gunshotwounds, Chap II. Does this law not conflict with our views in private practice? In the field the nature of the case, the poor want of surgical attendance afterwards may warrant it, but would this be justifiable in the civil surgeon? no! he would not be justifiable to amputate in the street or highway for many, very important reasons. for the first place if the injury is of the lacerated & contused kind, the extent of such an injury cannot be precisely known at the time in many instances. Internals have been known to be injured without betraying it, to the eye of amputation having been performed, secondary hemorrhage ensued the artery injured having sloughed above the point of

of the amputated limb, the patient dies from loss of blood.
On the second place, Amputation should not be performed
at all before the system has recovered from its first shock,
(reaction is about to be established), because the shock of
the operation added to the shock of the injury, is adding violence
to injury, may be more than the patient will be able to bear.
It has been said indeed by Hunter that an operation of this kind
should not be performed before the primary inflammation has
run its course, showing that this distinguished light of the
profession, has told the gravity of this military law.

11. In extensive injury of the larger joints an operation
is performed.

It ought not a lawyer in private life be guided by this law.
If such an injury, however extensive, is an incised one, it
may yet heal by first intention, if the lips of the wound can
be brought carefully & precisely together & kept there in proper
contact by adhesive straps, enjoining or enforcing perfect
rest by splints & bandages. Inflammation may be obviated
under this treatment & even should it ultimately ensue, on
dangering of course life & limb, amputation may then
be resorted to & prove as successfull as if performed imme-
diately. It will pay to make at least the attempt, for the

carrying of a limb is infinitely more honorable, than to amputate at thousands.

III. Where there is extensive loss of substance, or disorganization of the soft parts in the field, amputation is considered justifiable. It may be so true, where circumstances forbid other treatment, but, in my humble opinion, loss of substance alone, however extensive, should not guide our judgement or call up our decision. Too many cases are known in private life where the loss of limb seems inevitable, till the patient, revisiting an operation, the process of suppuration went on, the patient bore up under the heavy and wasting discharge, finally recovering with a good useful limb. Then there is the least prospect that the patient would bear the waste of the suppuration process, amputation should be delayed, as it may be resorted to afterwards should the first course of treatment prove unavailable.

IV. Compound fractures near the joints; with or without laceration of nerves or blood vessels, in connection with comminuted bones, especially where the injury is the fracture bone, are considered by military surgeons, accidents, where amputation may be performed with great proficency.

That in some instances amputation may at once
be resorted to in compound fracture near a joint admits
of no doubt or dispute. But these cases seem to be rare.
Should in connexion with a compound fracture the
fractured bone be smashed & comminuted, the large
blood-vessel ruptured, so that the limb could no longer
be nourished by anastomosing branches of it in conse-
quence of this; when furthermore the great nervous
trunks, supplying the limb with sensation, motion -
in fact with vitality, are severed by laceration, amputa-
tion of course is the only means to save the patient's
life. But the nearness of a compound fracture to the
joint even accompanied with laceration of the artic-
ular nerves, cannot exclusively excuse amputa-
tion. The compound fracture may heal gently, ea-
sily by first intention, the bone be nourished by anas-
tomosing branches of nerves influenced established
by ganglionic connection, and the patient recover with
a good & usefull limb. A fifth law (see Dr. Hennebu-
x, Opfer) the bones have been fractured or dislocated
without rupture of the skin, or even without great loss
of joint, but with injury to the ligaments & vessels

followed by extensive effusion; it, is considered proper to amputate.

It is true an injury of this kind leaves little hope beyond the knife. When the bones are dislocated & fractured, the ligaments extensively lacerated, the blood vessels in addition pouring out a copious quantity of blood & a speedy removal of the limb is too often necessary in order to save life. Still, where the dislocation is partial or easily reduced, & the fractured bones in favorable position, where the amount of laceration of vessels is not great, or where the hemorrhage may be readily controlled by ligatures above the injury, amputation may at times be dispensed with. For here the injury is below the sound skin, where a comparative severe wound will heal more readily, than if communicating with an external wound. Rest & position & a prompt antiphlogistic treatment may obviate inflammation after the reduction of the fractured & dislocated bone, the artery may be promptly secured, the ligaments adhere & the parts restored to a state of comparative usefulness. If then the symptoms do not call very urgently for speedy amputation, the limb may yet at times be saved, although in this instance it seems

mere possibility to effect it.

Before we draw our final conclusions the writer so
timidly protest's of being in any way opposed to any
kind of surgical operation, however formidable and
dangerous, having a smile of pity for the tender-nerved
(Hilquerites) & a sympathetic sigh for the miserable,
sufferer who drag out their existence with stumps
& limbs encumbering their motions, being a burden
& useless to themselves.

Gentlemen! I have presumed to state my views on
the subject under consideration with candid frank-
ness, perfectly open to conviction should experience
prove me in the wrong. Should however experience
agree with the product of the present reasoning, it
should bear with some weight upon practice in general.
Instead of plunging his formidable instrument into the
quivering fibres of his fellow man with strange delight
and irreparable haste, sound judgment and ripe delib-
eration will demand of the surgeon preserves of restore.
The inexhausted resources of nature & of surgical
science will be in the same degree developed,
as we are called upon to treat on the principle

of preservation more frequently & if sad necessity
commands a capital operation, all parts con-
cerned in the final result will feel relieved from
heavy responsibilities. And as we know the sur-
geon of the field, as we give due credit to his
contributions to our science, he will readily also
respect the principles of the practitioner in private
life & approve of his motives to meliorate the
stern laws of military practice.

Sigemond Waterman.







XVIII.

The
Valedictory Address.

By

Henry Adams Williams, B.A. Hamilton Coll.
Candidate for a Licence.



Notes of some of the Difficulties of
The Study of Medicine.

Henry A. Williams

Gentlemen —

We have arrived at the end of
our course. We have met, probably, for the last time. We had
formed by companionships in similar pursuits, no one so unbroken
as the friends, in affection, & interest in us, it were to be exchanged for
one in which we shall command, more or less, with the tongue, the
chemistry, the illus. &c. &c. With us, by good fortune — unaided by
genius. We righteously, in my opinion, attendants were to commit
meant into one of fate, & telos, & all, of anxiety. Upon this occasion
Mr. King, as it doth, one of the best of our Pines, & hence one of interested
to us all, what shall we say? & acknowledge by mind is exceedingly
impenetrable — not from any want of spirit; the eye, as it wanders over
the extended range of medical literature, discerns them on every hand —
not from want of knowledge, such as any other that the world

be likely to select, are about us in Profusion — but from the idea of
plagiarism which it most necessarily attached itself to a young man, without experience,
a writer — then when am I to i.e. shall we speak of herself? What does one
have of friends, except what the books tell us & our professors, forsooth?
I will take an article of the *Materia Medica*, & consider it in relation to all
the pharmaceutical actions now & it is capable of, including, in relation
to all the combinations into which it is capable of entering; in re-
lation to its medicinal effects when in combination, it would only have
the value of an *own & perfect*, & *sure* faculty of curing, not perhaps much
more than *nothing*, in a short time, much longer than necessary.
If the fault of our having previously had some experimental knowledge
of Remedies, were our thought in the direction, we I readily find
no other results, brilliant as we once thought them, completely sham-
ed by the ignorance of the elements when in the hands of the fathers
of American science. Now in to lury & the experience is still
more limited — we may have seen many operations, in our own practice
etc., extend as far, possibly, as mentioned at the close, the ex-
traction of a tooth, & the removal of a spiritus from the finger
& a c. etc. although we might do well with accuracy, every person con-
sidered when in a capital operation, & in many of originality
would be wanting the criteria well be afforded of our boldnessing that
ignorance which knowledge requires in our own that operation.

should be performed. In Anatomy, we can have discovered so few things—
as I am not even sure all that others describe; so that for some time
& come, we shall have to be satisfied with the idea, that our well-calculated
directions, will only reveal to us what has been him & again immediately
concealed by others.

After such thoughts were passing along my mind, it oc-
curred to me, that a note of some of the difficulties of the Study of
Medicine, would not be uninteresting, in interest tho' I cannot flah-
te myself that a single thing I may say, let not often occurred to
such one of you.

To one just commencing the Study of Medicine, there appears a
surmising diversity of objects to which he must give his attention.
He now & he must obtain an accurate knowledge of the structure of
man—& the function of the various organs of his system—of the
various and kinds of his diseases—of the materials with which, & now
in which these diseases must be made; but it is only after he has
internalized his attention, that he perceives the importance of
the task he has undertaken.

If Anatomy first employs his time, I find several distinct sys-
tems, each requiring long-continued study—the osseous, the muscular,
the vascular, the nervous—all equally necessary to life, & a knowledge
& each of which, equally necessary to the successful practice of his art.

in the body system, he finds a great variety of structures & processes
for the transmission of sense, nervous & arterial - of articulating, sub-
sidiary, performing various & complicated motions - of procreational, breathing,
digestive, & excretory functions - of the attachment of tendons, ligaments & cartilages -
carriage of the sinuses, osseous structures, muscles & articulating
surfaces, having a particular name, & description, & also having certain
definite relations to other parts, both near & remote.

In the muscular system, he finds several hundred muscles, the origin
insertion & uses of which he is expected to learn - but as for remem-
bering them, I can the authority of one who ought to know, for saying
that "A physician soon of you will be guilty of doing that at least
for a great length of time." Prof. Hooker, M.D. break phys. Yale Col.)
Many means certainly have been devised, to render the nomenclature easy
& apprehension & retention - names indicative of function, of position
& connection, have been applied. But notwithstanding all efforts at
simplification, the whole subject is undoubtedly a difficult one - the
first obstacle of Medical Students.

Next is the vascular system, with its arterial, venous, & lymphatic
vessels - not as difficult as the preceding, but still requiring
diligent study if one would master it in all its parts. Reading their
descriptions over - seeing them demonstrated once, will not suffice.
A careful, actual examination, as our Lands' finding the scalpel, is the

thing required - & who hoped to succeed without this will find his
hopes delusion.

This is no need that I refer to the Skrood by them - to the great organs of
the body - the Thoracic, Abdominal & pelvic viscera. I am aware that
this slight notion of some of the topics of anatomy, is not the surest
way of impressing upon the minds of those unacquainted with
it, the fact that it requires a vast amount of labor; but the
bare mention of these leading points, will bring vividly to your
minds, the long & tedious months you have spent in acquiring the
details of so intricate a structure - which acquaintance, is after
all, merely a scientific, and all-important step in our work.
The next part, I am think the student commonly considers &
desires, as having a more immediate relation to his profession -
namely: the acquisition of the knowledge of the various forms of
disease, of the various effects produced by it, & of the various modes
of removing it.

If he found difficulty in studying, he finds it in the principles
& practice of Medicine & Surgery, aggravated in a tenfold measure. He
leads of a thousand apparent difficulties, each with a legionary train
of perplexities of import, which in one point to a decided patho-
logical state, but in another to a condition scarcely of notice. This
not my purpose to speak of the labor of acquiring a complete pathological sys-

time; but I may speak of what constantly happens at one school — it is that we shall be able to recognize any particular disorder when we are submitted to the doctor. There are so many diseases which stimulate each other in important particulars, so many, of which a description, however exact, leaves no definite idea; so many even & often are different from, according to a prevailing disease; that we cannot avoid seeing them an essential part of our institution, if not to be derived from the schools, or systematic treatment, but from some kind of drill & discipline, to be exercised, &c., at the very moment when it is necessary to polish the knowledge we have. It is this which produces in us a feeling of dread upon entering our institution. How we know we may have read, however deeply we may have reflected, however well prepared we may be, in the estimation of those who are to pass judgement upon us, we are still conscious, that that essential part of our institution, can only be derived from the opportunities which an indulgent community may afford us. For all remember the beautiful illustration of a professor in one of the London schools — "A man was in the science of astronomy — may require the power to work upon paper, it is in himself, its most abstruse problems, & yet remain in considerate ignorance of the method of adjusting a telescope, & unable to ascertain for himself, the position or movements of a single star. But place such a man, in it after night, in an observatory — & him nothing will escape him, & he will, in examining the phenomena of the heavens, & he will soon acquire the zenith's star & Stanley himself. So in our own profession — it is in the ranks of the Society or in the Hospital Chamber, it is among the sick and

bying, & then alone, that we can either thoroughly or safely learn to practice
Physic". (Walton's Practice.)

But let us suppose, technically speaking, we have acquired
our profession, & entered upon it practice. We know the trials of a con-
scientious physician. He enters the abode of the invalid, & perceives the
eyes of anxious friends fixed upon him at their only relief. He enquires
at once into their feelings, & makes a careful examination of the
case before him. He brings the powers of his intellect to bear upon it, &
perceives it beyond the reach of Recovery. How shall he break intelligence
that will bear open the fountains of the heart, that will cause fond affec-
tion to weep least of bitter anguish indeed! And when the gentle
eyes of the gentle sufferer turn inslovenly towards him for a slight
day of hope, & none is afforded, how shall he bear the look of an-
guish which he meets! Ah! how unkind must he be for the high obli-
ties of his profession, if he cannot, at this trying moment, apply a
soothing balm to the crushed spirit, & kindly, tenderly, direct it
heavenward!

I will not speak of the numerous party annoyances we must daily
meet. Let us ride above them; let us think, at such times, of the digni-
ty of our calling; let us love it for the good it confers upon man, & not
for the honor it confers on us. Let a kind & affectionate address, be
combined with a vision of character & integrity of heart. Let general

intelligence be combined with a thorough knowledge of the subjects
with peculiarly affective & w. Without these things, & especially
without the last, we do not deserve success. Chastitarian ignorance
may assume a brazen impudence & carry all by storm—but the Proverb
adage applies with peculiar force here—"Man, like water, will find his
level." Great incapacity as you may, with bound-boundry protection, or
with admissions of a rival's superior talents or skill, it will finally
appear. He all cannot control his east, however carefully he may have
fished along his border, the inevitable approach of the king of beasts.
So with a kingdom, indeed, it may be by a return & sufficient deportment, over-
sight will arise. Then it will be only a question, perplexed & obstina-
tory, but effectually. And when this ability is perceived, then comes the
increase of long & levered tail—it comes in the form of silver & gold—it
comes in a form far dearer to the heart of man—the confidence, the
respect, the esteem of the community in which it dwells. Few of us will
make the city our place of residence; most—will seek a quiet country life; a
few go, not only to the "back-woods," but beyond them, to the broad, flow-
ing meadows of the West. But wherever we go, let us be ready for our
trial, intellectual, & even the aforesaid. In this respect, we one ab-
solutely & truly rank among the few, if not in our locality. Much of
the other learned professions, can at all compare with ours, in respect to
the "natural talents" requisite for success; & the favor of the Divine re-

gives an intimate knowledge of the human heart, of the working of human passions, of the influences which impress or excite them, how much more important is such knowledge to a medical man! The moral treatment of his patients, it always an important part of, & often the only treatment. Is the Divine required to be a man of large benevolence? He does not know, that but one half of a physician's time & labor, is given without hope of reward, only at he receives it in the gratitude of the recipient of his bounty! But often he receives not that - often has he given his anxious attendance upon indigence - the case had been his last - case at night - his earliest morning thought & in return, he has received the unenvied sight of calamity! But let some fell contagion visit that house! Now you may see the benevolence, combined with that "unobtrusive and bold courage" which a physician it so often called upon to display. Think you, a paltry toll-keeper, would send him to that house, pregnant with danger, perhaps death to all who enter it? No! Gentleman! These are lighter considerations - his reward is one of merit, not of gain. Indeed it is and can be paid, but from the almost universal practice of this virtue in the doctor, we naturally expect to see it in him, & it excites no remark. How different is it with the minister or the busy active act of kindness informed by either of them, is apportioned, & the same itself is spread abroad. But I will not multiply comparisons which may seem irrelevant. I will only say, that "the claim of an opposition to benevolence over

Sacred Philosophy, or account of the more extensive & varied learning which constitutes the mental endowment of a well educated Medical man is amply sustained by an appeal to the facts, that the contributions of nine-tenths of the intelligent party, are in our favor. Let us never disappoint their expectations, by our own insensate indolence.

But it behoves me not to be tedious. The things more & more painful will be no longer passed. It is natural that I speak of our associations for the past four months. They have been pleasant throughout so far as discontented elements have been permitted a place among us — nothing has transpired which we shall look back with other feelings than those of satisfaction. Readers recollect not of the kindness that has been shown us, will attend wth strong hope.

To the beautiful City — to its intellectual, its fair inhabitants, we owe kind action. To each other — an affectionate

Fondell.





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